CENSUS OF INDIA 1961

VOLUME IX

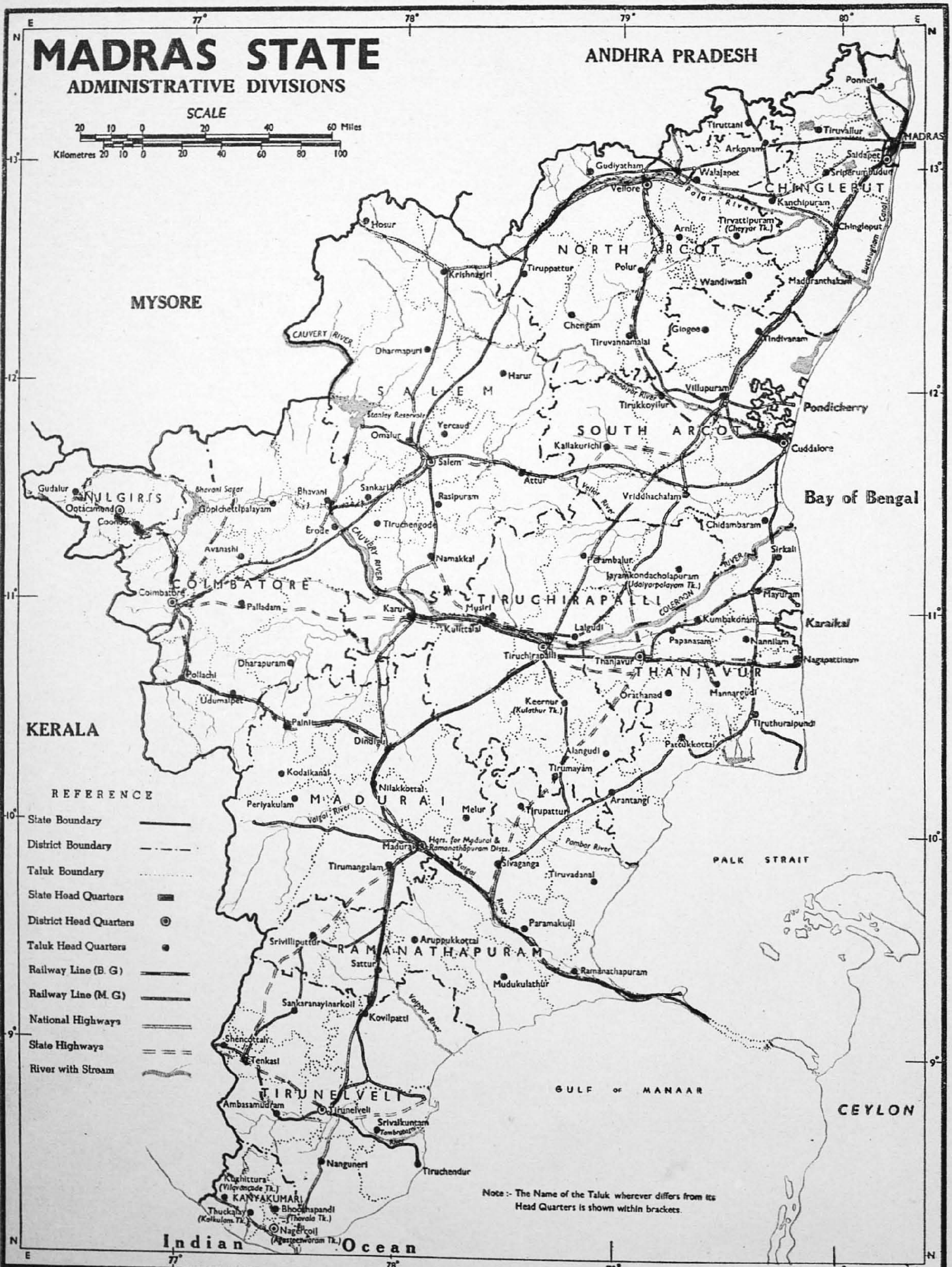
MADRAS

PART I-A(i)

GENERAL REPORT

P. K. NAMBIAR
of the Indian Administrative Service
Superintendent of Census Operations, Madras

1966



MADRAS STATE
ADMINISTRATIVE DIVISIONS
SCALE
20 10 0 20 40 60 Miles
Kilometres 20 10 0 20 40 60 80 100
ANDHRA PRADESH
MYSORE
KERALA
Bay of Bengal
PALK STRAIT
GULF OF MANAAR
CEYLON
Indian Ocean
Pondicherry
Karaikal
MADRAS
CHINGLEPUT
NORTH ARCOT
SOUTH ARCOT
SALEM
NILGIRIS
COIMBATORE
TIRUCHIRAPALLI
THANJAVUR
MADURAI
RAMANATHAPURAM
TIRUNELVELI
KANYAKUMARI
Ponneri
Tiruvallur
Tiruttani
Arkonam
Saidapet
Sriperumbudur
Gudiyatham
Walajapet
Vellore
Kanchipuram
Polar River
Arni
Tiruvattipuram (Cheyyar Tk.)
Chingleput
Buckingham Canal
Hosur
Krishnagiri
Tiruppattur
Polur
Wandiwash
Madurantakam
Chengam
Gingee
Tindivanam
Tiruvannamalai
CAUVERY RIVER
Dharmapuri
Harur
Ponnaiyar River
Villupuram
Tirukkoyilur
Stanley Reservoir
Yercaud
Omalur
Kallakurichi
Cuddalore
Salem
Attur
Vellar River
Gudalur
Bhavani Sagar
Bhavani
Sankari
Ootacamund
Coonoor
Gopichettipalayam
Rasipuram
Vriddhachalam
Tiruchengode
Chidambaram
Erode
CAUVERY RIVER
Avanashi
Namakkal
Perambalur
Sirkali
Jayamkondacholapuram (Udaiyarpalayam Tk.)
Coimbatore
Palladam
Karur
Musiri
COLEROON RIVER
Mayuram
Kulittalai
Kumbakonam
Lalgudi
Papanasam
Nannilam
Tiruchirapalli
Thanjavur
Nagapattinam
Dharapuram
Pollachi
Udumalpet
Orathanad
Mannargudi
Keeranur (Kulathur Tk.)
Tiruthuraipundi
Palni
Dindigul
Alangudi
Pattukkottai
Kodaikanal
Tirumayam
Nilakkottai
Periyakulam
Vaigai River
Melur
Tiruppattur
Arantangi
Hqrs. for Madurai & Ramanathapuram Dists.
Madurai
Pambar River
Tirumangalam
Sivaganga
Tiruvadanai
Paramakudi
Srivilliputtur
Aruppukkottai
Sattur
Ramanathapuram
Mudukulathur
Sankaranayinarkoil
Vaippar River
Kovilpatti
Shencottah
Tenkasi
Ambasamudram
Tirunelveli
Srivaikuntam
Tambraparni
Nanguneri
Tiruchendur
Kuzhithurai (Vilavancode Tk.)
Thuckalay (Kalkulam Tk.)
Bhoothapandi (Thovala Tk.)
Nagercoil (Agastheeswaram Tk.)
REFERENCE
State Boundary
District Boundary
Taluk Boundary
State Head Quarters
District Head Quarters
Taluk Head Quarters
Railway Line (B. G)
Railway Line (M. G)
National Highways
State Highways
River with Stream
Note :- The Name of the Taluk wherever differs from its Head Quarters is shown within brackets.
77° 78° 79° 80°
13° 12° 11° 10° 9°

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(Census Report—Vol. No. IX will relate to Madras only. Under this series will be issued the following publications)

† Part	I—A (i)	...	General Report (Chapters I to VII)
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*	I—B (i)	...	Demography and Vital Statistics (Report)
	I—B(ii)	...	„ „ (Tables)
*	I—C	...	Subsidiary Tables
* Part	II—A	...	General Population Tables
*	II—B (i)	...	General Economic Tables (B-I to B-IV)
*	II—B(ii)	...	„ „ (B-V to B-IX)
*	II—C-I	...	Cultural Tables
*	II—C-II (i)	...	Migration Tables (D-I to D-V)
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* Part	IV—A	...	Report on Housing and Establishments
*	IV—B	...	Housing and Establishment Tables
* Part	V—A (i)	...	Scheduled Castes and Tribes (Report & Tables SCT-I and SCT-II)
*	V—A(ii)	...	„ „ (Tables SCT-III to SCT-IX and Special Tables)
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PREFACE

In accordance with Census tradition, I present to the reader the General Report on 1961 Population Census of the Madras State. This is the first volume of the report. It contains an account of the mechanics of 1961 Census, physical set-up of the Madras State with its historical background, growth and movement of population, urban and rural population and migration. The second volume will discuss age, sex and marital status, literacy and education, language, religion, working population and non-working population and impact of Five Year Plans on the economy of the Madras State. This is supplemented by a series of volumes containing Tables which are classified as follows :—

General Population Tables

General Economic Tables

Cultural Tables

Migration Tables

Household Economic Tables

Scheduled Castes & Tribes Tables and

Subsidiary Tables

2. Usually considerable attention is devoted to the discussion of Vital Statistics in Census Reports. But during this Census, a separate volume (in two parts) has been devoted to a study of Demography and Vital Statistics relating to the Madras State. A Housing Census was conducted in October 1960. The data collected during that Census are covered by a report on Housing and Establishments supplemented by one volume containing Housing and Establishment Tables. In addition to this, Tables on Scheduled Castes and Scheduled Tribes have been presented in two separate volumes. As such, what used to be done in 2 to 3 volumes in earlier Censuses has been covered by a large number of volumes (16) thereby enlarging the canvas on which the Census data have been presented.

3. Another unique feature of the 1961 Census is that a series of special studies has been undertaken on an all-India basis and also for the Madras State itself. This has been rendered possible by the original lead given by Shri A. Mitra for planning special studies with a view to enrich Census literature. He himself suggested a series of special studies to be taken up by the State Superintendents and also encouraged every Superintendent to take up any special study relating to the State if he so desires. The result is briefly summarised below.

Socio-economic survey on 40 villages has been conducted in the Madras State. As this volume comes to the public, 24 such reports have been published.

Nine handicrafts have been surveyed in the Madras State and books on all of them completed.

A book on Fairs and Festivals is under preparation and will be issued shortly.

A report on Greater Madras City is under preparation. It will consist of 3 volumes.

CHAPTER I

INTRODUCTORY

The State of Madras with which this Report deals was born on 1st November, 1956 as a unilingual State with Tamil as its language. Before, it used to be one of the most polyglot of India's great administrative divisions. It had, apart from English, no fewer than five highly developed languages each with its own character, literature and tradition. There was a move to get its name changed to Tamil Nad but consistent with the high cosmopolitan tradition of Madras, it was rejected. As a compromise, the State is known as Tamil Nad in Tamil.

It is necessary to know the historical background of Madras State and its present set-up to appreciate the content of this report. But it has been the tradition of Indian Census Reports to tell the reader how the Census was organised before discussing any other matter. I have decided to follow the conventional approach to the problem and will set forth in brief the manner in which 1961 Census was conducted in Madras State. Administrative and other difficulties felt by me have been set forth in detail in the Administration Report for the guidance of my successor. I will, therefore, refer briefly to those aspects of Census work which will be of interest to the general reader and which will help him in appreciating in true perspective the value of the data collected by Census Organisation and the analysis which will follow in the succeeding chapters of this Report.

Beginning of Madras Census

2. Before discussing the measures adopted for the taking of Census of 1961, it will be of interest to review in brief the efforts made for the enumeration of the people of Madras State on former occasions. As far as our records indicate, no attempt was made to make an accurate count of the numbers of existing population in pre-British days. The State had interludes of settled administration but, during such periods, no attention was devoted to any Census count. Madras Census history is said to begin with a computation mentioned by the Court of Directors in 1687 which gave Madras as it then was with Fort St. George and villages around, a population of three lakhs. How this was arrived at and the precise area covered is far from clear and the extreme 'roundness' of the figure suggests a guess rather than a computation. After the establishment of British administration in the greater part of what is today Madras, Census history had its begining in the early 19th Century. The following table gives the result of the various attempts made by the administration to count the population of Madras State as it was then constituted:

1802	...	9.5 millions
1822	...	13.5 millions
1826	...	15.0 millions
1831	...	15.5 millions
1837	...	13.9 millions
1851	...	22.3 millions
1856	...	23.1 millions
1861	...	24.7 millions
1866	...	26.5 millions

The first two included North Kanara and 'Seringapatam' but excluded Kurnool not then (nor till 1839) part of the Presidency. These enumerations approximated in widely differing degrees to modern ideas of a Census. The 1802 record embodies in some cases calculations of population based on comparative reviews while the Madras City figure of six lakhs was computed from grain consumption. The Board of Revenue's reference which produced this Census asked significantly for the 'computed population' further remarking that if time did not allow of the village being taken as the unit, the 'division' might be. In essence, this call by the Board represented the beginning of the present statistical framework.

Later Efforts

3. The 1822 enumeration was carried out on a form devised by Sir Thomas Munroe for his Census-taking of 1802 in the Ceded districts. Its

details comprised only sex and age, the last vaguely as old and young. No Europeans were included. The males outnumbered females by 450,000. A count was held for Madras City which yielded 462,051, of whom 46,000 were said to inhabit the Nawab of Carnatic's palace. It is not certain how the Census results were then obtained, but it seems probable that the village commune with its staff of Headman, Accountant and other officials formed the groundwork of Census machinery. On this occasion, the population of the Madras Presidency was returned as somewhat less than 13½ millions (13,476,923). These figures included population of North Kanara, but omitted those of Kurnool which at the period referred to was an independent State. The Government desired a periodical enumeration and, as a result, the Board of Revenue carried out a three yearly count done mostly at jamabandi and based on enquiries made then. It was the existence of this early effort that led to the Court of Directors holding Madras up as a model when they compared certain Murshidabad figures as mere estimates and directed the Government of India to seek from the Government of Madras the means whereby the Census had been taken without offence or alarm to the people.

Quinquennial Returns

4. In 1849, the Government of India desired the Local Government to establish by means of its Revenue officials quinquennial returns of population such as it had been ordered in the Northwest Province. Thus was inaugurated a system of periodical stock-taking of the people which continued till 1871 when the Imperial Census was ordered. The first of these returns was taken during the year 1851-52, the second in 1856-57, fourth and last in 1866-67. The quinquennial Census of 1871-72 was merged in the Imperial Census of 1871. Thus it will be seen that within a period of 20 years, the population of this State was counted more or less efficiently on five occasions till it became a general pattern for the whole of India. As remarked by the Madras Government in their G. O. No. 813, dated the 27th March, 1868, there was nothing novel in the idea of a Census in this Presidency and there was no reason to anticipate any difficulty in carrying out the wishes of the Government of India. In order to give an idea how the quinquennial Census was introduced and subsequently conducted, it is necessary to reprint here the admirable code of instructions issued to Collectors and others drawn up by Mr. J.D. Sim, Sub-Secretary to the Board of Revenue in the year 1850 (Annexure I) These instructions were founded on others adopted in the Northwest Province, but modified to suit the system of Revenue Administration in Madras and were clear and complete as regards the points on which information was required. It will be seen that the manner of Census enumeration has not undergone any substantial change in Madras even by 1961.

As indicated already, more systematic Census-taking opened with five yearly sequence of which the first item gave the population for Fasli 1260 (1850-51). All Madras Censuses before the Imperial Series were referred to the fasli and not the calendar year. The population was divided into agricultural and non-agricultural, Hindu and non-Hindu, adults and children. The child and adult frontier was put at 12 for males and 10 for females. Later the non-Hindu section was sub-divided into Muslim and others. It was held that no Census of Madras City should be taken without legislative backing apparently because of the lack of co-operation, if not active opposition that might be expected. This seems to have been a pessimistic deduction from alleged indifference and contemptuous displeasure towards an enquiry connected with the proposed tax on wheels and horses, surely a very different matter from a Population Census. The City population was, therefore, estimated at 720,000. A Census was also taken in 1851 of persons residing in Madras who had been born in Great Britain and Ireland and of their wives and children.

1871 Census

5. Census of 1871 was an ambitious attempt at accuracy in regard to the age, caste, religion, occupation, education and infirmity of population. The circular of instructions of 1850 was however, sufficient to familiarise every subordinate revenue and village official in the country with the nature of a Census. If the 1871 Census had been more successfully carried out than any former enumeration, it was due to the fact that the great mass of village officials have, by past practice and

standing instructions, been drilled into the habit of conducting such enquiries.

Beginning of All India Census

6. The first Census of the whole of India was originally intended to have been taken in the year 1861, but, in 1859, it was decided that it would be improper to make an attempt so soon after the violent disturbances of the Mutiny by which a great portion of India was involved. The subject of a general Census was revived in a communication from the Government of Bengal on 4th May, 1865 (3185) in which it was urged that considerations which led to the postponement of Census in 1861 no longer applied and that anything like even approximate knowledge of the population was much felt in every department of administration. The Governor - General in Council accordingly suggested to Her Majesty's Government that arrangements should be made to undertake a general Census in 1871. The Secretary of State for India having expressed his concurrence in this recommendation, the Government of India called upon the several local Governments to furnish them by 1st January, 1870 with a report as to the best means of taking a Census. The Government of Madras replied to the effect that there was nothing novel in the idea of a Census in this part of India and that there would be no difficulty in carrying it out on receipt of instructions. The whole of the organisation of the arrangements for the Census of 1871 naturally devolved upon the Board of Revenue. Every former Census has been taken under the direction of the Board and it was obvious that no other Department had the requisite machinery or knowledge. As a preliminary to further operations, Collectors of the districts were directed to submit proposals of the special arrangements they considered it desirable to make and of expenditure to be incurred in regard to the Census of their several charges. The insructions issued from time to time by the Board of Revenue for the quinquennial Census Operations formed the groundwork of the regulations for the Census of 1871. The instructions drawn up by the Board for the guidance of district and village officials were most carefully considered and matured. It will be seen that the chief Revenue official in each district was entrusted with the sole responsibility of the Census Operations in the area of territory under his jurisdiction. In Municipal towns, the arrangement for Census was made and supervised by the Municipal Commissioners acting in concert wlth the District Collector. This arrangement has continued till 1961. The first thing done was to count and mark the house in each village and to ensure that every inhabitant of every detached hamlet was included in the proper village limits. The actual enumeration of the people and the filling up of the schedules extended over a period of not more than 15 days and finally when the information required had been obtained for the whole population in this manner and the enumerators' work had been checked and tested by the District Officials on the 15th of November, 1871, Census papers in every town and village were finally corrected and a special enumeration was made of travellers and of persons not present in any house. The agency employed in villages were the village officers working under the supervision of superior Revenue Officers of the district. In municipal towns, arrangements were entrusted to the Municipal Commissioners. The information collected on the Schedule was first a description of each house, whether terraced, tiled, or thatched. Then for each individual, the following particulars were recorded — age, religion, caste, race, country of birth, occupation and whether able to read and write. For persons below the age of 20, information was also collected as to whether they were attending school or college or were under private tuition and a column was provided for a note to be made against all blind, deaf and dumb, insane and lepers.

1881 Census

7. The Second Imperial Census was held after an interval of 9¼ years on the night of the 17th February and on the morning of the 18th February, 1881. In preparation for this Census, a Committee of Experts was appointed by the Government of India to suggest the best system for taking the Census and for publishing the results. The Committee decided in the main to follow the lines of 1871 Census, to employ as a rule the same agency and to continue the practice of having a preliminary Census extending over

15 days and a final Census which was to be synchronised. Some modifications were made in the Schedule, additional information being required on the civil condition, birth place, language and occupation of females. The result of the Census was the decrease of population by nearly ½ a million in consequence of the great famine of 1877 - 1878. It was estimated that the loss by famine to population of 1881 was about 3½ millions.

1891 Census

8. The next Census was held on 26th February, 1891 when for the first time, the States of Travancore and Cochin made their own arrangements to take the Census and publish the results. About 150,000 persons were employed as enumerators. In addition to officials, many non-officials were employed, most of whom gave their services gratuitously. The general procedure was the same as in 1871 and 1881. A preliminary record was written up from the beginning of January onwards. On previous occasions, a final record was made on the morning following the night to which the enumeration related. In 1891, however, the final census was taken on the night itself. The change did not give rise to any difficulty or inaccuracy. Special arrangements were made to publish the main results of Census as quickly as possible and the approximate total of the estimated population of each district was known on the 18th March.

1901 Census

9. The Census of 1901 was chiefly remarkable for the introduction of slip system of tabulating the result. The actual enumeration was taken in the same way as on former occasions. Final enumeration was held on the night of 1st March and the provisional totals, published on the 8th March, were only 0.024% different from the results finally tabulated.

1911 Census

10. The Census of 1911 was remarkable for one feature — the introduction of a special return of all Industrial establishments employing 20 persons and upwards. It cost about the same as that of 1901 and that it did not cost more, was due to the fact that the slip system of tabulation used in 1901 was continued without the necessity for waste of time and money on experiments to find out the best way of working it.

1921 Census

11. The Sixth Census was taken on 18th March, 1921. Legal authority for the procedure involved was conferred by the Census Act IV, 1920 and the rules framed by the Government of India, and by the Local Government under that Act. The date was selected with reference partly to the state of the moon and partly to the occurrence of fairs and festivals. It was considered desirable to have moonlight to enable the enumerators to get about and to avoid as far as possible large fairs and festivals which were bound to upset the normal distribution of population. The Government of India first wished the Census to be taken about the time of the full moon in February but they agreed to postpone it to March when the Madras Government pointed out that if held in February, it would coincide with the Mahamaham festival at Kumbakonam, a festival held only once in 12 years which would attract upwards half a million people to the town whose normal population was under 60,000.

1931 Census

12. The Seventh Imperial Census took place on the night of 26th February, 1931. The Census Act X of 1929 supplemented by rules of the Central and Local Governments provided the authority for the various stages. There were no changes from 1921 in the provincial limits. The special industrial Census return carried out in 1911 and 1921 by means of a separate return was abandoned in 1931.

1941 Census

13. The eighth Census was taken in 1941. The reference date was the sun-rise on the 1st March, 1941 which differed from any previous census, in that no simultaneous enumeration of the great bulk of the population was attempted. The main object of the change in procedure was the avoidance of unnecessary trouble and of waste of labour. Till then a preliminary enumeration lasted several weeks during which every member of the population was questioned and counted where he was then found. It was followed by a simultaneous

one night enumeration where the preliminary lists were corrected in accordance with the actual location of every member of the population on that given night. This involved a great deal of trouble. Thus the idea of simultaneous enumeration was given up. The area allotted to each enumerator was increased with consequent reduction in the number of enumerators, greater ease in training them and saving of labour and expense. It may appear that this will introduce a large element of risk, in that the members of household population who moved about during two to three weeks of Census period may get enumerated twice at different places or be omitted altogether. Those who did so were carefully warned and carefully questioned in order to avoid double enumeration and every effort made during this preparatory period to spread the idea that every single member should make sure that he does not fail to be counted once, but not more than once. Reliance was, therefore, to be placed on the good sense and civic spirit of the people of the State, coupled with the diligence and intelligence of the Census staff. A system of simultaneous enumeration was by no means an essential feature of Census. 20 days were allotted for the enumeration in rural areas and 13 days for the enumeration in the town. Finally, in order to relate births and deaths to a given point of time, the enumerator visited his area during the day time of 1st March, making necessary additions or deletions in accordance with the births or deaths that occurred prior to 6.00 a.m. that morning.

1951 Census

14. In 1951, the same procedure was followed, but all enumerators including those in towns were given 20 days time from 9th to 28th February—both days inclusive—for the enumeration. For their final check-up, they were allowed three days-1st, 2nd and 3rd March, 1951 instead of being asked to do the work in one day as in 1941. It was a combination of *De Jure–de Facto* methods as in 1941.

1961 Census

15. In 1961, the pattern of census-taking was standardised, based on the Indian Census Act (Act No. XXXVII) of 1948. The content of the questionnaire was finalised by the Registrar General, India and communicated to all State Superintendents including State Governments. In 1951, some freedom was given to the State Superintendent to add a question to the Census Questionnarie but this freedom was taken away for the sake of All India uniformity. The questionnaire was based on the discussions at Delhi and consultations with Union Ministers and Planning Commission, State Bureaux with the result that a high level of statistical refinement has been reached in this Census. The classification is based on the international usages adopted to suit the conditions in India. To what extent such a scientific approach is consistent with the conditions prevailing in the country will be indicated in the course of this Report. But, suffice it to say, the concept and approach of Indian Census can be compared favourably with any Census conducted in the more advanced countries of the world.

Aim of Census

16. What Census seeks to do is to find every man, woman and child living in the State at a particular time, to count them, to record their answers to a series of questions relating to such matters as their age, avocation or nature of work and occupation, level of education and so on. This process is known as enumeration. Subsequently, the particulars in respect of each individual are sorted into groups. The groups are further sorted under various heads. Thus we arrive at the final statistics which provides information of all kinds on which so many administrative and statistical activities must ultimately be based. These statistics are presented to the general reader in the form of various publications. The basic precaution to be taken is that no human being is omitted from enumeration when the time comes, nor is any person counted twice.

Census Machinery

17. The method adopted for ensuring a complete count has not varied from time to time at least in this State. Ever since the beginning of Census count in the 19th Century, supervised by the Board of Revenue, Madras, the pattern followed has been to entrust the work to the District Collectors and hierarchy working under them. It is the tradition of Madras State that

a District Collector can attempt to do any item of work in his district and harness the resources of the entire district for this purpose. As such, in any Census operation, only the nature of the questionnaire and the manner of enquiry have been settled by the Superintendent of Census Operations, details being left to the discretion of the Collectors themselves. This practice has been followed in 1961 also.

Early in the century, the Madras Presidency consisted of large tracts of territories of different languages and culture consisting of Tamilians, Oriyas, Telugus, Malayalees and Kannadigas. As a result of the Linguistic Reorganisation effected in 1956, the State has become a more homogenous unit, in that Tamil is the main language spoken. Again, the residual Madras State represents the best administered part of the States, in that it has remained under British administration for a longer period than any other part which formed the old Madras State. The only area added to this State is that of Kanyakumari which earlier formed part of Travancore State which was one of the best administered States in India and which had a tradition as old as that of Madras, at least in Census history. Therefore, the sensible course was to adopt the existing machinery for the purpose of enumeration.

Location Code

18. The first stage in the mechanics of 1961 Census was the assignment of location code numbers. In 1951, definite location code numbers were given to all districts, taluks, municipalities and villages in the State. The same principles were followed in 1961 also. Consequent on the States Reorganisation and the creation of new taluks and villages, the existing location code had to be suitably revised. It was a concept introduced in 1941 by Mr. M. W. M. Yeatts, Census Commissioner of India. In 1948, a complete system of location code was evolved for the entire State, approved by the Government and used for all purposes.

A scrutiny of the location code statements prepared in 1948 revealed that it had some defects and it would be desirable to revise the location code and bring it uptodate. Several changes had taken place since 1948. On 1st October, 1953, composite Madras State was bifurcated into Andhra and Madras. On the 1st November, 1956, as a result of the reorganisation of States on linguistic basis, Malabar district and Kasargode taluk of South Kanara district of Madras State were added to the former Travancore-Cochin to form the new Kerala State. The taluks of Vilavancode, Kalkulam, Agasteeswaram, Thovala and Shencottah (Part of the former Travancore-Cochin State) were transferred to Madras State. The whole of South Kanara district excepting Kasargode taluk and Kollegal taluk of Coimbatore district were transferred to Mysore State. As a result of the implementation of Andhra Pradesh-Madras Alteration of Boundaries Act, 1959 which came into force on 1st April, 1960, Tiruttani taluk was added to Madras State. New taluks, panchayats and villages were formed within the State itself. Therefore, a complete revision of the location code was undertaken.

The social unit with which the Census is concerned is the house which in census definition means every dwelling with a separate main entrance. The statistical structure should be such that every house in this Census is distinct in the records of the country and immediately distinguishable physically from outside. This could be achieved by the proper maintenance of the location code and house numbering system to which reference will be made later. The procedure followed was to give administrative units a serial number following the order in which they are usually set out in the State. The three important units were the district, taluk and village. Thus 1-1-1 would be a complete identification of a village in the first taluk of the first district and with the house numbering added to the code would indicate the first house in the first village and so on. So the location code would have a definite meaning in every part of Madras and would locate any Census house. The pattern of location code followed in 1951 was adopted this time also. But a new location code was worked out taking into consideration all the changes that have taken place after 28th February, 1951. Madras State was divided into 13 districts, Madras City being treated as a separate district for this purpose. Each division was treated as the second element of the code and the number to the road, lane and street within each division was the third element.

The fourth element was the house number assigned by the Corporation of Madras to each Census house. For Madras City, a complete 4 element location code already existed. Outside Madras City, the first element was the number assigned to the district and the second the number assigned to the taluk and the third the number assigned to the municipalities, panchayats and villages. One number was allotted to each municipality, major panchayat, minor panchayat and village, keeping in tact the geographical contiguity. They ran in one series from the northern-most corner to the southern-most corner. Before a number was given to any particular unit, care was taken to see that it was treated as a separate entity for purpose of house-numbering. To this third element code was added the locality number, street number and house-number in the case of municipalities, cantonments and major panchayats where the locality system of house-numbering was in force, and the block number-house number in the case of minor panchayats and villages where the block system of house numbering was in force. Thus a 6 element location code was evolved in the case of municipalities, cantonments and major panchayats and 5 element location code for minor panchayats and villages.

The code numbers assigned to the districts and taluks in the State will be found in Annexure II. It was made the duty of the Tahsildar to assign the third element of the code number to the units in his taluk. He listed out all the panchayats, villages, cantonments and municipalities and gave the numbers. A map of the taluk was also prepared to satisfy himself that all units have been covered. In addition to this, a cross-check with the location code prepared in 1951 was also attempted. For this, a statement was prepared by each Tahsildar in the case of villages which have been completely included in a panchayat, cantonment or municipality after the last census in 1951. The fact of such merger was indicated in the "Remarks" column of the proforma against the name of the panchayat/municipality in which it stood included. In the case of portion of a village being added to the panchayat, cantonment or municipality, even such changes were indicated. Similarly, names of villages which have gone out of existence since 1951 were also indicated in the "Remarks" column of the proforma in the geographical order and the fact of the disappearance noted. In the case of villages or units which have been transferred from one taluk or district subsequent to 1951, name of the taluk from which the village or unit was transferred as also the location code number given in 1951 for that unit was also noted in the remarks column. Two copies of the statement with the map were prepared by each Tahsildar. One was scrutinised by the Collector of the district and the other was sent to the Superintendent of Census Operations not later than 30th April, 1960. They were scrutinised and necessary modifications made. In the case of districts of Chingleput, North Arcot and Salem, territorial changes took place as a result of the implementation of Andhra Pradesh—Madras Alteration of Boundaries Act 1959. The details of the changes made are indicated in Annexure III. Tiruttani taluk was added as a new taluk to Chingleput district. There were a number of inter-village transfers and the Tahsildars had to pay particular attention to assign new code numbers to these areas.

These instructions were exhaustive, but in actual practice, the location code should have been simplified to some extent. The state is now divided into two groups, one having the locality system of house numbering with 6 numbers and the other the block system of house numbering with 5 numbers. The concept of locality was introduced in 1949 on the consideration that certain areas like Mylapore, Egmore and Triplicane in Madras City have been known to the public for a long time and have earned a distinct place in their memory. In actual practice, the locality has been given up in Madras city. It is now divided into 100 divisions based on the electoral rolls and the location code is centred round it. Similarly, it would have been an ideal arrangement to give up the concept of locality in places like Coimbatore and Madurai and adopt the ward as a fundamental unit in the location code system. The ward has a greater significance to the average man than the locality because it has precise geographical boundaries and has significance in each election that is conducted in that area. It will, therefore, be desirable in 1971 to adopt the ward as the basis of location code. To make this possible, it will be necessary to delete locality

from the house numbering system in Madras State. Actually, Madurai had as many as 500 localities which meant that every street was treated as a locality.

Rural Urban Classification

19. Rural-Urban classification was another important step in Census enumeration. Early, it was suggested by Sri A. Mitra, Registrar General, that the principles followed in West Bengal in 1951 could be applied for classification of urban and rural areas. A place could be classified as town provided it had a population of not less than 5,000, a density of not less than 1,000 per sq. mile and at least 3/4 of the adult male population was employed in pursuits other than agriculture. It was suggested that at least two of the criteria should be applied uniformly in all States. The classification of urban areas in the past has been based on the recommendation of District Collectors. However, all areas were reclassified on the basis of this definition. Irrespective of the criteria all corporations, municipalities, cantonments and townships were declared as towns. Places which have definite urban characteristics were treated as urban even though their population was less than 5,000. On this basis, I prepared a list of new towns to be included in 1961 Census and also towns to be deleted from urban areas and sought the views of the Collectors based on their personal knowledge as well as on a detailed field investigation. After personal inspection, the list was finalised. 339 places were treated as urban. 30 places classified as urban during 1951 were deleted and 73 new places included. The principles governing the urban-rural classification, the difficulties encountered in such classification and their implication on future demography will be discussed in detail in Chapter IV of this report.

Census Divisions

20. The next step was the division of the State into charges and the division of each charge into circles and blocks for the purpose of enumeration and appointment of Supervisors and Enumerators. The general scheme followed was based on the previous Census. The District Collectors were put in full charge of the Census Operations in the district under their control. the only exception being the City of Madras where the responsibility was that of the Commissioner of the Corporation of Madras. The Collector was vested with the powers of the District Census Officer and was assisted in his work by his Personal Assistant who was empowered to act on his behalf. Revenue Divisional Officers had control over Census operations in their respective jurisdiction. Each district was sub-divided into Census charges, each charge being under an officer designated as charge officer. The Tahsildar was the Charge Officer for all areas within his taluk other than municipalities and special charges. In the City of Madras, the *City formed one charge under the control of the* City Census Officer assisting the Commissioner of the Corporation of Madras in the discharge of his duties as District Census Officer. The City was divided into 4 Charge Officers' circles, each circle under the control of an Assistant Revenue Officer who was designated as the Charge Officer for his area. Places like cantonments, army, air force and naval establishments which had a separate administration of their own formed special charges. For ensuring a complete coverage of the entire population, the areas were divided into viable units known as Census divisions. The charge officer divided his charge into suitable circles and blocks.

In order to ensure that each district was properly delimited into different census charges and that no area was left out, each Charge Officer prepared a statement in the prescribed form, a complete list in triplicate of all charges within his jurisdiction and sent it to the Collector of the district for approval.

The Charge Officers divided their charges into suitable circles and blocks. Each block was so delimited that every enumerator had the optimum work-load which was fixed as 750 persons in rural areas and 600 in urban areas. Freedom was given to the Charge Officers to delimit the block in such a way that much strain was not imposed on any enumerator. It has been *a matter* for discussion whether it will be possible to utilise the block formed by the National Sample Survey, a wing of the Cabinet Secretariat for Census enumeration. Their approach to the problem was different from that of Census. They would delimit the areas on the geographical basis giving landmarks which would be useful for identifying

the area while the demarcation of Census blocks would be based on the principle that the optimum load for an enumerator should not exceed 600 and for this purpose, a certain number of houses would be allotted to each block. Their demarcation cut across the principles of house-numbering system. It was, therefore, in practice difficult to adopt the National Sample Survey block for Census purpose as from the very nature of its formation, population varied considerably from block to block. It was, however, the desire of the Registrar General that maximum help and co-operation should be afforded to the National Sample Survey. They decided to prepare these blocks in 7 Class I and 11 Class II municipalities. But some Municipal Commissioners were not happy about this arrangement because the blocks formed by the National Sample Survey were not uniform in size and further certain areas had been left out because of the boundaries cutting across geographical landmarks. As such, freedom was given to the Commissioners to utilise the blocks only when they found them suitable. Actually in Madras State only 7 Class I municipalities-Madurai, Madras, Tiruchirapalli, Salem, Vellore, Coimbatore and Thanjavur and three Class II municipalities - Kumbakonam, Kanchipuram and Nagercoil adopted these blocks. The area in charge of a Supervisor consisted of 4-6 blocks. In thickly populated areas, it consisted of 4 enumeration blocks. Civil aerodromes, ports, railway stations, railway colonies and other major institutions were treated as part of the town or village in which they were situated. Large institutions such as hospitals, central jails, major ports and railway colonies having a population of 250 or more were formed into separate circles. In order to ensure that the enumeration blocks within the charge fully accounted for all areas included within these blocks, chargelists were prescribed for each Charge Officer in which the list of blocks and circles with the house numbers indicated against each were prepared. The date of submission of chargelists was specified as 1st August 1960. In Madras there were 188 charges which were in turn divided into 10,539 circles and 52,235 blocks.

Census operations in Pondicherry-Madras Border

21. The major difficulty experienced in the formation of blocks related to the Pondicherry State which has a number of enclaves within the South Arcot district with the result that several tracts of Pondicherry State are detached and surrounded by villages in Madras State. The difficulty was further accentuated by the fact that certain houses have their main entrances in one State and portions of the structure in the other. Double enumeration would occur if specific responsibility were not assigned to the enumerators concerned. The then Superintendent of Census Operations, Pondicherry suggested that perhaps the Madras Enumerator could be made responsible for enumerating houses in Pondicherry State also using different books marking them P or M as the case may be. After reflection, it was decided that it would be best to conduct enumuration of houselisting on the basis of jurisdiction only. There was complete coverage of houses in the house-numbering system and as such local authorities would have determined whether a particular house was in Madras or not. All that was needed to make the coverage complete was to have the co-operation of the officials on either side to finalise the jurisdiction of each house.

Comprehensiveness of blocks

22. As observed earlier, the block is formed on a somewhat ad-hoc basis, viz. that it should have 600 persons in urban areas and 750 in rural areas. It is much easier to observe this principle in rural areas of Madras State. Actually it was stipulated that unnecessary bifurcation of small villages should be avoided even relaxing this limit whereever necessary. And even in the case of larger villages, a block was invariably limited to a ward, so that there could be geographical boundaries defining the limits of each block. To a larger extent, this achieved complete coverage in the rural parts. But in urban areas, I had real practical difficulties. One is the possibility that no geographical boundary can separate two blocks with the result there can either be omission or overlapping. Secondly the position was much complicated by slum areas in which houses appeared and reappeared with an alarming rapidity. The position was a little more complicated by the desire of National Sample Survey Organisation that their blocks should be utilised for Census count. This was of course permitted only in

certain municipalities where the Commissioners felt that they could implement the suggestion, the final responsibility for the decision being left to them. It therefore, involved a lot of labour to see that no area was left uncovered. Another difficulty which sometimes arose was the growth of residential units round the municipal boundaries covering portions of villages. This meant that the house was neither included in the municipality nor in the village. One such specific instance came to my notice in Tiruchirapalli municipality and had to be rectified. While the success achieved in having a complete geographical coverage of the State has been substantial in 1961 Census, I cannot make the same claim regarding the coverage of all houses in urban areas.

No uncovered area has been discovered in this State because the Survey and Settlement in Madras State has been organised in an efficient manner and a house-numbering system covering all the houses is maintained as part of day-to-day administration. Whether any failure by any local body to maintain the house-numbering system uptodate will result in an undercount has been discussed by me separately.

Computation of Urban area

23. No difficulty was felt in separating urban areas from rural. All the boundaries of municipal towns in Madras State have been fixed by statute on the basis of definite boundaries, but difficulty was felt in computing areas of urban localities. It involved a lot of correspondence with the Tahsildars and Commissioners.

Census Calendar

24. The following was the calendar for the conduct of Census Operations in Madras State:

1. Assigning of location code numbers ... 30-4-1960
2. Formation of charges and delimitation of circles and blocks ... 30-4-1960
3. Submission of charge lists... 31-7-1960
4. Check-up of house-numbering and bringing them uptodate ... 30-9-1960
5. Training of houselisting staff 30-9-1960
6. Houselisting ... 1-10-1960 to 31-10-60
7. Training for actual enumeration and sample Census ... 1-12-1960 to 31-1-1961
8. Enumeration of household population including institutional population ... 10-2-1961 to 28-2-1961
9. Enumeration of houseless population in mofussil areas excluding non-synchronous tracts ... Night of 28-2-1961
10. Enumeration of houseless population in Madras City ... Nights of 28-2-1961 to 4-3-1961
11. Enumeration of houseless population in non-synchronous tracts ... Noon of 1-3-1961
12. Revisional round ... 1-3-1961 to 5-3-1961
13. Enumeration of naval vessels, passengers and crew of ships, ocean liners etc. ... 1-3-1961 to 15-3-1961
14. Reporting of provisional totals ... 9-3-1961

A break-up of the agency employed for Census enumeration is given below:

	Enumerators	*Supervisors*
Village officials	13,997	86
Teachers	31,069	4,966
Local Board Employees	3,595	948
Officials of the Revenue Department	327	1,708
Officials of other State Government Departments	1,805	2,433
Officials of Central Govt.	1,417	393
Others	25	5
Total ...	52,235	10,539

Quality of Census Agency

25. It will be interesting to examine the quality of our enumeration agency. Out of a total of 52,235 enumerators, village officials accounted for 13,997, and Teachers 31,069. The standard of education of village officials is lower than that of the teachers. But village officials have good experience of the conditions in rural parts

of Madras State and are well versed with the procedure involving the collection of data at various points of time. They have participated in all activities relating to compilation of statistics from time to time. Further they also maintain statistical registers relating to the village. The proverbial apathy which prevents village officials visiting the house is more than counterbalanced by his intimate knowledge of the conditions in the village by which he knows every individual. The teachers generally have the qualification ranging between VIII standard and S.S.L.C. I feel a more highly educated enumeration agency is needed to implement a programme in which higher concepts based on international practices have been incorporated. As much effort as has been possible was made to make the enumerating agency understand what exactly was the concept employed. With the best intention, it was not possible to put across these concepts which are definitely foreign to the average citizen in India. Further it is difficult to import these concepts in the regional language in which enumeration was conducted mainly. There was no adequate equivalent to express the concept in the regional language. A great difficulty was experienced when the teachers serving in urban areas were sent to rural parts for enumeration. The general unwillingness of a person residing in urban parts to do work in rural area because of the hardships involved in the process was manifest to any observer. The position was more difficult in the case of the Supervisors who are better paid people. In view of the low educational level in certain tracts of the State, it became necessary to depute Supervisors and Enumerators from distant places though they were compensated by payment of a Travelling Allowance. In practice it meant that all the 20 days were not fully utilised for enumeration work. These factors have to some extent impaired the efficiency of the enumerating agency employed by us. But suffice it to say that this agency employed by us is as good as any agency employed in other States or in earlier Censuses. What I have in mind is the willingness of the Census Organisation to understand the magnitude of the problem involved in collecting detailed data based on concepts which are difficult to understand. The difficulty in understanding the concepts employed in the Census will be discussed later.

Discipline of teachers in management institutions

26. One aspect which has struck me is that the majority of the teachers are employed in private institutions. As a rule the teachers of private institutions are less disciplined and less amenable to discipline. In my Administration Report, I have illustrated instances of indifference and negligence shown by private school teachers. I do not wish to repeat them here. But what has handicapped our programme is the absence of a suitable provision in the Educational Rules of the Madras Government by which teachers in the private institutions can be subjected to disciplinary action.

Houselisting

27. Three documents were prepared in 1961 Census. Preparation of houselists formed the first stage. But it was a significant stage in that a complete housing Census was attempted for the first time in the Census History of India. During previous Censuses, the houselisting was done as a preparation for enumeration in that it would provide adequate information for planning of the actual count. Actually in 1951 this was not attempted in Madras State. The scope of houselisting was considerably enlarged in this Census which involved the introduction of three new concepts-Building, Census Houses and Census Households and the collection of many items of information. The details of houselisting and its mechanics have been discussed in my report on Housing in Madras State. I may, however, highlight a few points at this stage. The information collected for houselisting has not been utilised fully for the preparation of Tables. Houselist is an important document and has now been preserved at each taluk headquarters. It is necessary to evolve an agency which will keep it uptodate. Panchayats functioning in Madras State can be one such agency. Houselists, if properly maintained and preserved will provide sufficient basis for conducting sample surveys and furnishing adequate data for economic as well as housing development.

House-numbering

28. In connection with the 1951 Census, a house-numbering system for the first time was introduced

in Madras State. The details of the scheme of house-numbering were settled in August 1948 and a period of 2 years was allowed to implement the scheme. It was part of an all-India scheme initiated by the then Census Commissioner for India, but it was implemented only in Madras State. The intention of the Government then was that house numbers assigned under the scheme should be maintained on a permanent basis and should serve all purposes such as preparation of electoral rolls, assessment of tax by local authorities, Postal Services etc. Every dwelling should be readily identifiable from outside by a number which was attached to it and so long as it existed, this number would acquire importance through common use. I have indicated in detail the broad principles of this scheme and how it was implemented in Madras State in Chapter I of the Housing Report of Madras State. In any Census undertaking, it is necessary to identify the house in which persons live. So I decided to adopt the house-numbering system as it existed in Madras for the basis of Census enumeration in 1961 Census. This decision was at variance with what was done by other States where the Census Superintendent decided to give separate Census numbers to the buildings existing in the country. But this decision had its practical problems. The principles enunciated by the Government were not understood or implemented in certain areas of the State. Due to this as well as intense building activity during the decade 1951-61, it was evident that special attention would have to be devoted to bring house-numbering uptodate. I thought it would be worthwhile attempting it because it would be useful to evolve a uniform pattern of house-numbering throughout the country which could be used for all purposes by all agencies functioning under the Central and State Governments. Today each Department gives a separate series of numbers to every building in the country. This confusion in numbering has to disappear if a proper and systematic count of the building in the country has to be made and a register maintained in which details about the existing buildings can be had. In connection with the 1961 Census a separate housing census was conducted three months in advance of enumeration. This made it all the more necessary to base the Census count on the existing house-numbering system.

In Madras State, house-numbering was part of the maintenance of electoral rolls and the principles of house-numbering were defined in Part II of the Election Manual. It indicated that house-numbering should not be changed without the prior orders of the Government. It was, therefore, necessary to approach the Government of Madras and seek their concurrence authorising me to make such changes as were necessary in the house-numbering system of Madras State consistent with the principles enunciated by the Government in 1948. Some practical problems were involved in bringing the house-numbering uptodate as on 30-9-1960 but I would not try the patience of the reader by detailing them for their information. One important point of difference which arose between me and the Election Department was that they considered it necessary to maintain finality in house-numbering as the electoral roll was based on it and as any revision of house-numbering would involve reprinting of the electoral rolls at a huge cost to the Government. At the same time it was not possible to work on the basis of *status quo* in any Census enumeration in which every person living in a house as on 1st March had to be counted. Ultimately the Government decided in favour of my making as many changes as necessary in the house-numbering of Madras State.

In spite of the fact that best efforts were made by me, it is likely that a permanent house-numbering would have resulted in a few omissions for two obvious reasons-as the building activity is a continuing process and as the municipal authorities could not be expected to keep pace with the building programme, it was likely that certain buildings would not be numbered at all by the local bodies. This apprehension was very well voiced by the Registrar General, India. To meet this situation, both in the Houselisting Manual and the Enumeration Manual, it has been emphasised by me that whether the house had a number or not was immaterial for Census enumeration and whenever any number was not found on the building, it was the duty of the enumerator to put 'x' in the appropriate column and proceed to enumerate all the persons residing in that house. A scrutiny of the houselist as well as the enumeration slips have shown that the enumerators followed these

instructions carefully. It is, therefore unlikely that any omission has taken place but the possibility does exist. Again this house-numbering has to be maintained by different authorities in the State called Local Bodies and the efficiency is likely to vary from place to place. So to base a general Census on the activity of these isolated local bodies has an element of risk and a Superintendent should be extra careful to see that the house-numbering is brought uptodate. Perhaps this position will be made easier if the enumeration is based on the households on a *de jure* basis which I will discuss later. The second difficulty experienced is the existence of a large number of huts in the important towns of the State. They appear and disappear with alarming rapidity. The huts which existed at the time of houselisting would disappear from the spot and will reappear at some other spot by the time enumeration takes place. Again no systematic numbering of the huts on which no tax was paid to the municipality was maintained by any of the local bodies. Actually I had to see that numbers were given to such huts by the municipalities before the house-listing took place by a series of sub-numbers. But the possibility has to be borne in mind that huts can multiply in any locality at any time and extreme caution is needed before enumeration takes place.

Training of Census personnel

29. In any Census programme the imparting of training is an important item. Training classes were conducted first for the Charge Officers by me and by the headquarters Dy. Superintendent of Census Operations. In addition to this, the Dy. Superintendent of Census Operations, stationed at headquarter towns of Madras State and the Charge Officers conducted the training classes. A minimum of 6 training classes was conducted by the Dy. Superintendents of Census Operations and the Charge Officers. In the course of my tour, I attended as many training classes as possible and participated in the discussions which took place after instructions were given. The discussions were always lively and many interesting points for consideration were raised by the enumerators. Thus there was a complete exchange of views and an attempt to understand the different concepts employed during this Census. In order to give a practical reality to the training classes, a Sample Census was held in which slips and schedules printed in red ink were used. The object was to train the enumerators and supervisors in the actual count. The Sample Census was conducted under the direct supervision of Charge Officers. The scope of the training class was to see that as much of the content of Enumeration Manual was understood by the Enumerators as possible.

Mechanics of Enumeration

30. The formal count began on 10th February, 1961. It lasted till 28-2-1961. Special arrangements were made for enumeration of military, naval and air force personnel. In addition to this, enumeration of ocean going vessels was also conducted.

Enumeration-Honorary or paid

31. It is an unfortunate fact in Indian Census history that the tradition of honorary work has been associated with Census enumeration, perhaps a legacy from our days under British administration. It is very difficult to expect a large body of 60,000 workers in the State to devote more than two months for the enumeration working overtime without any adequate monetary return. A departure has been made in this Census that every enumerator was given a sum of Rs.20/- for meeting out of pocket expenses involved in his work as an enumerator. This is a right beginning. But it is necessarry for us to realise that in future censuses some payment to enumerators has to be considered in the interest of larger accuracy of census work. In the past we have relied on the prestige which the Government officials and District administration enjoyed in the district to get the work done. Owing to democratic decentralisation and greater consciousness of rights and privileges among the people, it is no longer possible for the official machinery to extract such work from the enumerators. Again, with the change in the attitude of the people it has become a habit to make some payment to any item of work undertaken by them.

Post-enumeration check

32. In 1951, the concept of a post-enumeration check on a random sample basis was intro-

duced as part of the Census Operations. The principle underlying this check was that completeness of enumeration could be estimated only by planned verification conducted immediately after the original enumeration in selected blocks and houses. This check was conducted in 1961 also. It was made clear that the intention in conducting the check was only to measure in statistical terms the extent of error in Census enumeration and was not to find any deficiency in the work of census officials. The salient features of the scheme are explained below. Census population count may be different from the actual count due to errors in enumeration of Census houses, households and members of the household. Re-enumeration of these elements on a sample basis will help us to assess the degree of these three component errors. In order to verify the errors in the coverage of houses, an independent list of houselists of selected blocks was prepared and by attaching it with the list of dwellings, each enumerator had to determine the extent of error in the block. This list was prepared independently by Verification Officers. The unmatched entries in the list prepared by the Verification Officer and that prepared from the Census Population Record were re-verified on the spot by the Charge Officers. This helped to detect all cases of omission and over-enumeration which had occured. Particulars about such unmatched entries were collected so as to indicate the type of difficulties faced by the enumerators. The number of houses and persons under-enumerated or enumerated twice in the enumeration was obtained. Errors in the enumeration of persons in houses covered by Census were ascertained by an enumeration of the sample houses by the Verification Officer who was given a list of names of sample houses. To test the reliability of the Verification Officer, ghost entries and deliberate omissions were made by the Charge Officers in the list of names of sample houses. The Verification Officer was expected not only to check the list of names given to him, but also to obtain particulars of persons missed in the count who were normally residents and visitors eligible to be enumerated during the Census period as well as persons who were enumerated above. As regards persons omitted to be enumerated, particulars regarding their age, sex and relationship to head of the household were also collected by the Verification Officer. In the 13 districts of the State, 260 urban and 369 rural blocks were selected for post-enumeration check. Out of these, post-enumeration check was conducted in 259 urban and 358 rural blocks. The result of the post-enumeration check revealed an under-enumeration of 0.9%. The results of the post-enumeration check will be discussed later.

De Jure Vs. De Facto Enumeration

33. Today the enumeration is based on the combination of *de jure* and *de facto* systems. Actually, the scheme is based on the following principle. A visit is made to each house during 10th and 28th February. A visit to each house is made during a period of time say 20 days ending with the reference date usually fixed as the sunrise on the 1st March. A revisional round is made immediately following the enumeration by a re-visit to each house and births and deaths recorded and any new persons found in the house who have not been enumerated earlier, again enumerated. This is a combination of *de jure* and *de facto* systems. Actually, the serious drawback in the system is that the enumeration will depend on the statement made by the persons concerned before he is enumerated. Again the person so contacted may not know whether he has been included in some other place by the enumerator because actually it is not incumbent on the part of the enumerator to contact all the persons enumerated by him. As such, there is possibility of a double count. It is also likely that a person may change his mind and will not move to the place to which he had the original intention of moving and such cases are not properly covered by the present method. Actually, in a census of our type in which scientific concepts are employed and a machinery evolved with a view to ensure complete coverage, the success of the scheme depends on the information which an illiterate citizen can furnish to the enumerator whether he has been enumerated previously or not. Thus it is not proof against the possibility of a double count. It is, therefore, wiser to have a *de jure* count in which persons residing normally in a particular household are enumerated against that household unless he or she has been absent for a definite period of time to be fixed by the census

authorities. This will help us in having a definite number of households, to which all the citizens will belong. Of course, this count can be further augmented by counting houseless persons and persons residing in boats and ocean-going vessels which form a very small percentage of the total population of India. It is, therefore, necessary to consider whether a *de jure* count may be adopted for our country in future censuses just as is done in countries like U.S.A. and U.K. The only objection which can be raised against it is that the head of the household in India is not literate enough to fill in the schedules if it is sent to him. This can be got over by sending an enumerator to each household and have the individual slip filled in at the residence itself. Mr. Yeatts in 1931 pleaded strongly for the introduction of *de jure* system in Indian Census. Actually, the arrangement then made was to count all the population on a fixed date which involved the deployment of a large number of enumerators with consequent possibilities of greater errors. This system was modified in 1941 to what it is today. The present system can be further modified to see that it is done on a *de jure* basis with a curtailment of period required for the completion of census enumeration.

Salient Features of 1961 Census

34. The Census was based on the canvasser method as distinct from the household method. The enumerator visited each household during enumeration period and took the count. It was also desirable to maintain comparability of the results of each Census with those of the preceding ones and this demands continuity both in definition and concepts and in questions from one Census to another. However, certain new features and questions were introduced in 1961 Census. Two questions newly included in the Census Slip related to migration, i.e. duration of residence if born elsewhere—other than the place of enumeration and the rural or urban character of the birthplace and were incorporated to study migration trends in detail. In economic questions a bold departure was attempted. While in earlier Censuses economic independence was made the criterion to measure the economy of the country, in 1961 Census all people who worked including family workers not in receipt of any income and working children who could not earn enough for their maintenance were included as workers. Separate questions were devoted to those working at cultivation, as agricultural labourer, at household industry or in any other economic activity. Among the documents, houselist and household schedules formed new features. The former collected statistics of houses and buildings and the purposes for which they were used. It was also the aim to find out the total number of people living in such houses, the number of rooms occupied by each household, the material of roof and wall. The latter was designed to collect data on the chief economic activities, household cultivation and household industry. Part II of the schedule-Census Population Record-replaced the old National Register of Citizens and contained names of all persons in each household, sex, relationship to head, age, marital status and description of work, if any. The actual Census operation was divided into two parts, houselisting forming the first phase of Census in October 1960 and actual enumeration from 10th February to 5th March 1961 forming the second phase.

Household cultivation and household industry were defined in such a manner that unless a good deal of study was made, it was difficult to grasp the precise significance of the definitions. It also involved a distinction between rural and urban sector. For the first time in the Indian Census, the concept of worker was introduced. It meant that all persons who did some work were returned as workers irrespective of the fact whether they earn or not. A large number of women who assisted the heads of the households in cultivation and other operations, without having any separate income of their own were returned as workers during 1961 Census. Information on migration was collected distinguishing between rural and urban places of birth. In actual practice, it meant a good deal of difficulty because the persons enumerated would not be in a position to say whether a particular area in which he or she was born has been classified as urban or rural in 1961. During 1961 Census, at the instance of the Council of Scientific and Industrial Research, statistics relating to persons with a recognised degree or diploma in Science, Engineering, Technology and Medicine was collected. For this

purpose, printed cards were distributed to such individuals, who possessed the requisite qualifications. These cards were handed over to the members of the public by the enumerators during their first visit between 10th to 28th February 1961 and completed cards were collected from the household when the enumerator went on the revisional round from 1st to 5th March 1961. Whenever it was not possible to deliver the cards, during the revisional round, the individuals were advised to post the cards to the address given on the reverse of the card. No postage was to be paid. An appeal to the public to co-operate with the enumerators was also distributed along with the cards. The low percentage of the return shows the difficulty involved in getting a citizen of India to co-operate in furnishing statistical details and how realistic it is to rely on canvasser method in Indian Census. Even the highly educated section of the State declined to fill in the cards and return them to the authorities in spite of the propaganda done in favour of such enumeration.

Arrangements for Enumeration of Special Areas like Military, Naval and Air Force Charges

35. All Military, Naval and Air Force areas constituted separate charges under the Census Scheme. The areas occupied by Defence personnel were clearly demarcated into such special charges as distinct from municipality or cantonment in which they were found. The Officer Commanding or his nominee was posted as Charge Officer. The personnel living in the area were enumerated by the Special Charge Officer (including the civil population). The other military personnel in the military establishment, but living outside the strictly military areas were enumerated by the Charge Officer of the civil zone in which such military personnel were living. In the case of Defence personnel, the nature of employment was not indicated except to make a general remark that they were employed under the Central Government. All soldiers billetted together and messing from a common kitchen constituted one household. Each naval ship at sea was treated as a separate census unit. If the ship was at sea during the enumeration period and was not likely to touch the port during the period of enumeration, the Officer Commanding the ship conducted the enumeration and intimated the Port Naval Officer the result of enumeration. Officers and members of the crew of naval ships who are quartered on shore at a particular time and who are normally residents of the harbour towns were enumerated by the enumerators of the block in which they had their residence. In the case of naval ships touching other ports, the enumeration was conducted by the Port Officer/Enumerator appointed for the purpose. The instructions applied to Air Force personnel also. It was likely that one or two units either of the Army or Air Force might move out of station during the period of enumeration and would not reach the next station before the completion of the enumeration. In respect of such units, the Special Unit Officer intimated the details of the units moving out during the period mentioned above and the probable date of such movement.

Enumeration of ocean-going vessels

36. For the enumeration of passengers in ocean-going vessels, ocean-liners, naval ships and sailing barges, Port Officers of Cuddalore, Tuticorin, Nagapattinam, Madras, Kilakarai and Colachel were appointed as Port enumerators. They enumerated the naval ships which left their naval base during naval exercises or other friendly visits. Passengers and crew of such ocean-going vessels plying between Indian ports and foreign ports which touched the port of India on or before sun-rise of 1st March 1961 were enumerated at the first port of call or at the next port of call.

Enumeration of diplomatic and consular missions

37. Non-Indian Nationals who are members of the staff of Diplomatic and Consular Missions and members of their families stationed in Madras and Tiruchirapalli were excluded from the scope of Census enumeration. But the Indian Nationals residing in the premises were enumerated. For this, the Charge Officers addressed the Officers of the Embassy and on getting their consent conducted their enumeration on the appointed day. Indian Nationals who enjoyed diplomatic immunity and foreign Nationals who did not enjoy diplomatic immunity were enumerated under the general procedure.

Special arrangements were made to enumerate a pilgrim special which arrived at Madras-Egmore

at 16-20 hours on 28th February, 1961 and another at Erode at 21.30 hours on 28th February, 1961.

Arrangements were also made for the enumeration of a contingent of military troops who encamped at Aramboli for training from 6th February to 5th March, 1961.

Centralised printing of forms

38. The printing of forms was centralised at the Government of India Press at Aligarh, Calcutta and Nasik. Houselist forms, Household Schedules and Individual Slips in English and regional languages were printed and then distributed to the State Superintendents. To facilitate the printing in Southern regional languages, flongs were prepared at the Government Press, Madras by photographic reduction. All other census material was got printed locally, chiefly by the Government Press, Madras. This worked efficiently. No scarcity of forms was felt at any stage.

Quality of enumeration

39. It is always difficult to grade the districts or areas on the basis of completeness and excellence of enumeration. Better type of work has been done in areas with a high level of literacy. Madras City, Kanyakumari, Thanjavur and Tirunelveli have done good quality work. In districts like Thanjavur, Tiruchirapalli and Tirunelveli, where the revenue administration is maintained on a high standard, good maps and houselists have been prepared. In general, the quality of enumeration has varied from block to block and from taluk to taluk, depending on the amount of interest taken by the enumerators, supervisors and Charge Officers. It will be correct to say that greater the interest shown by the Charge Officers, more was the efficiency of enumeration.

The quality in Madras City was of a high order though its coverage was not as complete as in other places. Salem and North Arcot have done better than I expected, inspite of its low level of literacy and weak revenue set-up. The work done in South Arcot and Chingleput was below par. More was expected of Coimbatore.

In my view, for a complete and efficient enumeration, the co-operation of the District establishment under the personal leadership of its Collector is still needed.

A further study of the quality of enumeration can be made on the basis of post-enumeration check, difference between provisional totals and final totals and the difference between the houselisting population and the final population. An analysis of the results show that 1,009 persons were enumerated during the post-enumeration against every 1,000 persons counted in the 1961 Census.

The following statement gives the results in rural and urban areas of the State.

Result of Post-enumeration Check

	Rural			Urban			Combined		
	Type (i)	Type (ii)	Total	Type (i)	Type (ii)	Total	Type (i)	Type (ii)	Total
Estimated error as a percentage of censused population	0.13	0.58	0.71	0.22	1.21	1.43	0.15	0.75	0.90
Sampling percentage error	27.7	22.7	19.3	23.5	22.2	19.1	19.2	16.1	13.8

Note: Type (i) represents error due to omission or duplication of a house as a whole and hence its inmates.

Type (ii) denotes error due to omission or duplication in counting inmates in a house visited by the Census enumerator.

The estimated true population of Madras State in rural and urban sectors per one thousand is given below. It also gives the lower and upper estimate of true population with a confidence limit of 99.7%.

True population per 1,000 enumerated by Census

	Rural	Urban	Combined
Estimated value	1,007	1,014	1,009
99.7% confidence value			
Lower	1,003	1,006	1,005
Upper	1,011	1,022	1,013

In general, the error in count is higher in the thickly populated urban areas with their complexity with regard to the nature of structure of housing and mobility of population. The error in count in population is, however, small and within reasonable limits.

For the purpose of assessing the relative efficiency in enumeration in different districts, the following procedure has been followed:

In Form IV, "Summary of House verification," the number of persons censused in the blocks selected for P.E.C. (x) and the number of persons in houses missed in enumeration (y) and the number of persons in duplicated or wrongly included houses (z) have been given. From this, the percentage of under-count due to the omission or duplication of a house as a whole has been arrived at as $(\frac{y-z}{x}) \times 100$.

In Form VIII, "Summary of re-enumeration of persons", the number of persons in sampled houses who have been censused (p), misssed by Census (q) and over-enumerated (r) are given. The percentage of under-count due to omission or duplication in counting inmates in a censused house is estimated as $(\frac{q-r}{p}) \times 100$. The results are presented in the following table.

District	Percentage of Under-count due to omission or duplication of a house as a whole	Percentage of Under-count due to omission or duplication in counting inmates of a censused house	Total under count
Madras	0.53	2.07	2.60
Chingleput	0.06	0.41	0.47
North Arcot	0.18	0.63	0.81
South Arcot	0.09	0.23	0.32
Salem	0.29	...	0.29
Coimbatore	0.30	0.36	0.66
Nilgiri	0.21	0.56	0.77
Madurai	0.07	1.19	1.26
Tiruchirapalli	0.11	0.34	0.45
Thanjavur	0.06	0.70	0.76
Ramanatha-puram	0.05	0.17	0.22
Tirunelveli	0.04	0.50	0.54
Kanyakumari	0.36	0.46	0.82

The percentage of error in enumeration is to a certain extent the true index of efficiency of enumeration. On the basis of the degree of error in count revealed by the above table, the districts may be arranged as follows in the order of their efficiency in enumeration:

Name of the district	Rank
Salem	1
Ramanathapuram ...	2
South Arcot	3
Tiruchirapalli	4
Chingleput	5
Tirunelveli	6
Coimbatore	7
Thanjavur	8
Nilgiri	9
North Arcot	10
Kanyakumari	11
Madurai	12
Madras	13

In all the districts except Madras and Madurai, the percentage of error is less than one percent. In Madurai, it is 1.26% and in Madras 2.60%. Madras and Madurai are major cities and a higher percentage of error has been found. It reinforces my view that there is a possibility of a greater error in cities with a large concentration of population.

A further indicator is the difference between provisional and final population. The following table gives the percentage of variation between the two figures in the districts:

Rank	District	Percentage of variation of the final from provisional population
1.	Kanyakumari	+ 0.01

2.	Nilgiri	- 0.03
	Ramanathapuram	+ 0.03
	Tirunelveli	+ 0.03
3.	Chingleput	+ 0.12
	Thanjavur	- 0.12
4.	North Arcot	+ 0.14
5.	Madurai	+ 0.20
6.	South Arcot	+ 0.23
	Madras City	+ 0.23
7.	Coimbatore	+ 0.45
8.	Salem	- 0.58
9.	Tiruchirapalli	+ 0.65

Madras and Madurai districts have again recorded a comparatively high percentage of variation. The maximum variation is noticed in Tiruchirapalli followed by Salem and Coimbatore. For the State, the variation is 0.17%. A better accuracy has been observed in Kanyakumari, Nilgiri, Ramanathapuram and Tirunelveli.

Variation has also been observed between houselist and final population. The districts have been arranged according to their rank on the basis of percentage of variation.

Rank	District	Percentage variation
1	Ramanathapuram	— 0.36
2	Tirunelveli	+ 0.96
3	Kanyakumari	+ 1.42
4	South Arcot	+ 1.52
5	Salem	+ 1.56
6	North Arcot	+ 2.81
7	Madurai	+ 2.82
8	Tiruchirapalli	+ 2.95
9	Chingleput	+ 3.07
10	Thanjavur	+ 3.08
11	Coimbatore	+ 4.13
12	Nilgiri	+ 6.01
13	Madras	+ 6.84

The districts of Chingleput, Thanjavur, Coimbatore, Nilgiri, Madras, North Arcot, Madurai and Tiruchirapalli have recorded a higher variation than the State average.

General standard of enumeration

40. The general impression one gains is that the Census count has been on the whole made to a high degree of accuracy. This has been facilitated by the following factors:

(i) The enumerator received a minimum training course of six practical lessons during one of which he made a sample census of several households, the results of which were again discussed in the class;

(ii) The numbering of Census houses was done ahead of the Census enumeration and houselisting operations enabled the enumerator to acquaint himself with the local conditions. As far as possible, the enumerator was drawn from among the local population and he was familiar with the local conditions and his local knowledge was quite useful for correct enumeration;

(iii) The entire State was divided into compact revenue units with well defined geographical boundaries which rendered omission unlikely;

(iv) For almost all villages, maps were prepared. They were useful for identification and verification on the ground;

(v) The preparation of notional maps for the houselisting agency enabled the enumerator to have a better idea of the location of Census houses and households; and

(vi) Besides the interest shown by the enumerators, there was general enthusiasm among the public which was sustained by the propaganda done in favour of Census by the Press. No outside factors like the antipathy or boycott of the Census enumerator or the system of statutory rationing have affected the Census count of 1961.

Manual Sorting

41. Sorting has been done by hand, except in the case of household schedules. Preliminary work relating to sampling and coding was done in my office for household schedules also and samples sent to Delhi for mechanical tabulation. Experience of this Census has proved clearly that the time has come for Indian Census to give up manual tabulation. To depend on human agency to sort out slips and prepare complicated tables has ceased to be practical. In practice, a large number of temporary persons are recruited from the open market and entrusted with sorting and coding. They have no permanent interest in the work they do. Actually, less the out-turn, more they will continue in the work. Any attempt to speed up sorting could only be done at the expense of accuracy. Bonus was paid to the staff who did better work and in order to measure efficiency, the system of awarding marks was

introduced in Madras Census Offices. It helped to some extent, but had its own defects.

A serious danger which threatened the accuracy of data was the tendency of staff to correct the slips in order to see that internal consistency existed. The supervisory staff had to be constantly on guard against this tendency.

Coding

41. Coding was a different problem. It was a new concept introduced in 1961. Inadequate information was recorded in the enumeration slip for a proper coding to be done. The standard of coding varied from person to person and as such, coding had to be checked a number of times, before finalising it. One difficulty experienced in coding and sorting was the absence of a well trained nucleus staff in the Census Office which had adequate experience of these items of work.

Some of the common errors committed by the enumerators are listed below:

1. The enumerator's block number was entered as the fourth element of the location code instead of the house-numbering block number.
2. The revenue number of the village was entered as the third element of the location code instead of its location code number.
3. The abbreviation used for houseless population 'O' and 'X' for household population living in un-numbered houses was interchanged.
4. Ambiguous terms like "Uncle", "Niece" and "Grandson" were used in filling up Column 1 (b).
5. Instead of noting "D" for people born outside the place of enumeration but within the district of enumeration, the name of the place was written in the individual slip without specifying the name of the district.
6. Converted Christians were treated as members of the Scheduled Caste
7. Generic names like Scheduled Caste have been noted without specifying the particular caste or community.

Although literacy has been defined as ability to read and write a simple letter, the application of this definition to students of lower standards like I, II and III has not been uniform. It was also difficult to indicate at which standard the level of literacy would be attained. Some of the students whose ages have been noted as 6, 7, 8 and 9 have been returned as illiterates.

Generally, the quality of enumeration in filling up the demographic questions was of a high order.

More mistakes were committed in dealing with economic questions. To some extent it is due to the new concepts and definitions introduced in 1961. Concepts of household industry have not been properly understood. In some cases, Questions 10 and 11 have been confused. Casual labourers engaged in allied and incidental occupations of agricultural labour have been wrongly classified and noted against Question 11.

Perhaps a simplified questionnaire on economic activities will solve the problem. What we need is only a primary and secondary work and it will be sufficient if two questions are provided to cover these. Classification of workers into different categories could be done at the tabulation stage on the basis of information recorded by the Enumerator.

The common error found in the household schedule related to the household industry against Sub-Part B.

Some activities which would not strictly fall within our definition were noted against Sub-Part B. In Part A, extent of land owned by absentee landlords were wrongly noted, even though they were not treated as cultivators. Mistakes were also found in Part C of the Schedules. In some cases, workers engaged in agriculture were noted against Column C (1) and in household industry under Column C (2) and their total against Column C (3). It involved doubling the number of family workers. What was needed was the number of persons engaged both in agriculture and household industry against Column 3. Perhaps this confusion could have been avoided by providing only one horizontal column for recording the number of workers in a family.

ANNEXURE I

Circular to all collectors dated 17th February 1850, No. 298

Sir,

I am directed by the Board of Revenue to forward herewith rules etc. for a census of the population of your district to be taken on.

2. The Government are particularly desirous *that this Census should be taken with the utmost* care.

3. To ensure the attainment of this object, it is absolutely essential that the co-operation of the people should be secured and their prejudices and suspicions removed and it is equally necessary that the persons entrusted *with the work of* enumeration should be thoroughly instructed in their duty beforehand.

4. The degree of success obtained in these important respects will depend on the exertions of yourself and your assistants and the Board are satisfied that your best efforts will not be wanting to meet the wishes of Government.

5. The printing press at your disposal will enable you to communicate the intention and objects of the Census to the mass of the people and you will use it freely for this purpose. The Board request also that the fullest advantage may be taken by yourself, your assistants and principal officers of the Jummabundy settlement of tours through the district, *personally* to convince the people of the true objects and advantages of the Census, to assure them of its having no connexion whatever with taxation and to gain their confidence and co-operation.

6. The rules prescribe the manner in which your officials are to be instructed and how each is to check the work in its different stages. Every *opportunity, however, should* be taken by yourself and your assistants to test their qualifications by questioning them on points of detail and they should be distinctly warned that any inaccuracy which could have been prevented by care on their part will be punished. You will also be careful to apprise *them that any attempt at exaction will* be considered a serious offence and to impress on them that they must endeavour to perform their duty in a concilatory manner and with as little inconvenience to the people as possible.

7. In the villages the Census will be taken by the village officers and in towns or villages of large size *you are authorised to employ special agents either* to aid the village officers or to do the work entirely themselves. You will require the tahsildars to inform you whether in any particular instance the village curnum or munsif from want of education, unpopularity or other cause should not *be entrusted with the duty, and you will make* special arrangements to meet the difficulty.

8. The Board also leave it to you to determine which of the tahsildar's subordinates shall be entrusted with the duty of checking the returns of the peishcars, so as to relieve the tahsildar and make the *examination of the village returns* as searching as possible immediately on their receipt, when supposed inaccuracies can be inquired into with a prospect of success. The degree of care taken by the enumerators will depend materially on the opinion they entertain of the character of the subsequent examinations and it is indispensable to convince them that these will be searching and prompt.

9. As a rule every return should be forwarded by the village officers on the day of computation, be taken in hand immediately by each of the higher officers and forwarded *as each* is finally checked to your office. (The abstracts will *all* be prepared in your office to prevent the returns being delayed in the taluks).

10. In your office the returns will be tested by comparison with other statements by personal inquiries etc. Your subordinates might for instance test the returns of their own villages or of those with which they are acquainted and form a good idea whether there is any material inaccuracy. Particular individuals who are entered as heads of families might be questioned as to the correctness of the number of inmates in their houses on

the night of Census. A few of your officers might also be deputed to make similar inquiries in adjacent villages. By these means you will be enabled to form a fair judgment of the general accuracy of the Census and it is particularly desired that you will give your opinion explicitly on this point.

11. The Board hope the forms and rules will be found sufficiently clear, but request that any doubts you may entertain may be communicated to them as well as such suggestions as you may be inclined to offer.

12. You will perceive that in column 2 of statement 2 the head of the family is to be entered whether present or absent. The entry of the name of the head is chiefly to fecilitate subsequent investigation and is not made contigent on the presence of that individual because this might lead to delay and confusion in settling who should be deemed the *present* "head" for the occasion. You will carefully explain this to your subordinates. The subsequent columns will show the actual number of persons present in each house.

13. In filling up these columns the guiding principle is that *every one present should be entered, everyone absent omitted except* only such members of each household as are on duty or engaged in labor at nights *and return* home in the mornings. Mettu and Thanah peons, not having houses, will be returned as residents of the villages in which they are stationed.

14. There may be some difficulty occasionally in deciding whether a person is to be returned as 'agricultural' or 'non-agricultural'. The principle will be to include them as one or the other according to the source from which the *bulk* of their subsistence is derived.

15. The most difficult matter, however, will be to secure an accurate Census of jungle tribes and wandering communities; your own experience and the counsel of persons conversant with the habits of such tribes will enable you to make arrangements in these exceptional cases. The Board particularly request that your plan of operation in regard to these classes may be fully detailed in your report, in order that a judgment may be formed of the correctness of the returns and that the experience gained on this occasion may be made available for the next Census.

16. There are a few points in which the experience of the officers of the North-West Provinces in 1833 may be of use to you : a copy of the printed report was forwarded to your office on the 24th April 1855.

17. You will perceive that in some cases the enumerators in the North-West neglected to include themselves ; in others infants at the breast were omitted. Some tahsildars again included Chermers etc. as Mahomedans. These and similar errors you will be careful to guard against.

18. Your attention is also drawn to the great disparity of the sexes in some places in the North-West Provinces. Should any of your returns exhibit a similar marked inequality, you will carefully test the correctness of the return and if that is established, investigate the cause of the disparity.

19. You will perceive that in many instances in the North-West returns were made by householders themselves. You have authority to follow this course whenever you deem it safe and it is only necessary for the Board to point out how very desirable it would be to secure the co-operation of the people in this manner. The reckoning of females is distasteful, to Mahomadens generally, but by this means their prejudices will not be offended and it may be hoped that persons thus taking trouble to furnish correct returns of their own households may be induced to take an interest in the Census generally and use their influence to persuade others to be accurate in their returns.

20. You are at liberty to entrust the detailed management of the census to one of your assistants if your other duties will not permit you to give the matter the close and constant attention it will require. You will of course carefully supervise your assistant's proceedings notwithstanding this arrangement.

21. The Board expect that your returns will be forwarded to them at the latest within three months after the day of Census and they request they may be expedited as much as possible.

22. You will be good enough to report whether you will require any additional assistance in your own office, and if so, mention the number and pay of the extra servants you consider necessary.

23. You will perceive from the report on the Census in the North-West Provinces that a preparatory or trial Census was made in many districts previous to the final one with the view of making the enumerators practically acquainted with their duties. The Board leave it discretional with you to follow this course wholly or partially according to circumstances.

(Signed) J. D. SIM.
Sub-Secretary.

RULES

1. Collectors will without delay make extensively known to the people the desire of Government that an accurate Census should be taken of their numbers etc. and endeavour to disarm their prejudices and suspicions. The district presses will enable the Collectors to circulate printed notices largely and in these particular stress should be laid on the fact that the Census has no connexion whatever with taxation or the imposition of fresh burdens. Collectors will also use the opportunities afforded by their personal intercourse with the people to convince them of this fact.

2. The Census in the villages will be taken by the curnum accompanied by the munsif, both of whom will sign the returns and be held answerable for their accuracy. If the village be too large for these officers to do the work jointly each may undertake a separate portion with the help of the other village officers and if necessary additional persons may be specially engaged at the Collector's discretion under Rule V.

3. Printed returns will be sent in duplicate to each curnum at least two months before the time fixed for the Census, in order that they may carefully study them and be instructed how to fill them up.

4. The Collector will take care to instruct the tahsildars and heads of police in the first instance: these officers will instruct the peishcars and other officers (having charge of several villages), who will finally instruct the munsifs and curnums. A supply of spare statements should be furnished to each peishcar to guard against accidents, and the tahsildars should be required to satisfy themselves by personal inquiry, whenever opportunity offers, that the peishcars have thoroughly instructed the village officers. The same course will be followed by the European officers in their tours through the district.

5. In villages of large size the Collector will allow the munsifs and curnums to employ one or more competent and trustworthy assistants on their own responsibility, and will give them such remuneration as he considers reasonable.

6. In towns of considerable size the Collector will himself select suitable persons for the duty, allotting to each a certain quarter of the town, and requiring them some days previously to make themselves thoroughly acquainted with their ranges.

7. Charges incurred under Rules 5 and 6 will be submitted for sanction in a separate bill.

8. The village officers will forward their returns to their peishcars on the day the Census is concluded.

9. The peishcar's first duty will be to see that the returns are properly prepared, and if not, to have the necessary amendments made immediately. If the return is correctly framed, he will proceed without delay to check some* of the entries by personal inquiry, in which duty the entry of the name of the head of each family will afford great facilities. He will attach his signature in the column of remarks to such of the entries as he has checked with a note of any inaccuracies he may detect. He will then forward each return, as checked, without delay to the tahsildar.

10. The Tahsildar will check the returns by personal inquiries in the same manner as the peishcar, and, noting the entries he has personally checked, will forward each return as soon as possible to the Collector.

11. The returns will undergo further scrutiny in the Collector's office, and will be checked as far as circumstances permit by the Collector and his assistants.

12. The results will be embodied in the Collector's office in a taluqwar statement with an abstract of the whole district, and forwarded to the Board with any remarks the Collector may have to offer, and *in all cases* with his opinion as to the accuracy of Census.

*N.B.—Not less than 10 per cent in each village practicable.

13. The taluqwar and district statements are to be prepared in the Collector's office in order to obviate delay, and relieve the taluq and village officials as much as practicable.

14. Statement No. 1 will be fixed up in the villages at least 10 days before the day fixed for the enumeration of the people, and will, be separately sent to the Collector through the peishcars and tahsildars.

15. Columns 1, 2, 3, and of 4 of statement No. 2 will be filled up some days before the day of census.

16. On the day of the census the other columns will be filled in, the village officers proceeding from house to house for the purpose, and obtaining the requisite information with as little inconvenience to the people as possible.

17. In column 1 of both statements *empty* houses will also be entered, provided, of course, that they are not mere ruins, but are only uninhabited at the time. The absence of entries opposite them will show that they are empty without any remark to that effect in the statement. The houses will be numbered in consecutive order as they stand.

18. In column 2, statement No. 2, the name of the head of each family will be entered opposite its members. This will afford great facilities for check, as most of them will be able to mention how many persons slept in their house on the night in question if inquiry is promptly made. When the same house is occupied by more than one family, the head of each will be entered by name in column 2. If the head of the family is absent on the night of census, his name will still appear in column 2, but be omitted from the subsequent columns. A note will be entered in the margin intimating his absence from home. Bachelors, spinsters, and widows, if cooking and eating their meals separately, will be entered as heads with their dependants or children. Heads of families will, of course, also be included, *if present*, in the *numbers* of the subsequent columns, and not omitted on account of the entry of their names in column 2.

19. A "family" comprises all who live under the same roof, cook their meals together, and partake of the same meals.

20. Hindus of all castes and including pariahs will be entered in columns 5 to 13, Mahomedans in columns 14 to 21 and Christians, as well as all persons *not* being Hindus and Mahomedans, in columns 22 to 30. Collectors will take care that such classes as chermers, pariahs, & c., are not included in columns 14 to 30.

21. In column 3 of statement 2, the caste of the head of the family *only* is to be entered. The *caste* of a stranger or guest temporarily an inmate of the house will be also entered opposite his name.

22. In column 4 the occupation of the head of the family is to be entered, and that of strangers or guests temporarily resident in the house.

23. The "agricultural" class * includes zemindars, mootahdars, renters of lands, meerassidars, ryots, paycaries, pullars, &c., and all persons whose subsistence is chiefly derived from land, whether they are personally engaged` in agriculture or not. Merchants dealing in the produce of lands, only as grain merchants for instance, are not to be entered in this column unless they are also land-holders and live on its proceeds rather than on the produce they purchase and retail. The occupation of subordinate members of each family need *not* be entered, as they will be included in the "agricultural" or "non-agricultural" class according to it. Thus, suppose a ryot of the Vellaler caste has five sons (living with him as one family), of whom three follow agriculture, one is engaged in trade, and one is in Government service as a peon. The ryot as head of the family would be entered in column 3 as "Vellalar" and in column 4 as "Cultivator". He himself and the three sons engaged in agricultre would appear (according to age) in column 5 or 6. The other two sons would appear in columns 9 or 10. Again, suppose the head has three unmarried daughters and a widowed sister with him, and his sons have each a wife and child. The three daughters of the head of the family and widowed sister would appear in columns 7 or 8. The wives and and children of his three sons engaged in agriculture would also appear in the same column, but the wives and children of the other two sons would appear in columns 11 or 12.

24. The "non-agricultural" class comprises generally persons living by trade, ship-owners,

* This class will include village servents paid in land, shepherds, cowherds, toddy-drawers, abkkarry contractors.

fishermen, yeomiahdars, and others in receipt of *money* allowances, Government officials paid in money, medical men, priests, school masters, vakeels, pensioned and retired soldiers, soldiers on leave, handicrafts-men, domestic servants, salt manufacturers, musicians, and all classes not deriving their living from land.

25. In Columns 5 to 30 no person present in a house on the night fixed on is to be omitted, and no person absent is to be included except Police peons, taliaries, private watchmen, and others doing night duty and regularly returning home in the morning.

26. Males and females above 12 years of age are to be entered in the columns for adults.

27. Males and females under 12 years of age in the columns for children. Children newly born and infants at the breast are to be included in these columns.

28. The census of persons passing the night at chuttrums, serais, dak bungalows, encampments, &c., must be taken at sunset, as, if delayed till morning, many may have continued their journey and escape enumeration. *In all other cases* the census will commence at *sunrise* of the day succeding the night of the census.

St. 3

29. Returns of the inmates of jails, hospitals, and schools will be made by the person in charge of the institution. Forms of the statements and rules will be forwarded to them for the purpose in good time, and will be sent for in the day succeeding the night of enumeration.

30. Domestic servants living within the compounds of gentlemen and passing the night in their premises will be included in the returns of the master of the house.

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31. Returns of lascars and others passing the night on ships, &c., in harbour will be sought from the commander of the vessel, to whom the requisite forms will be sent by the Collector or Master Attendant.

32. *Wandering tribes, Brinjarries, &c.*, will require special arrangements for which precise rules cannot be laid down. The Collectors must provide for the enumeration of these through the agency of their headmen, or in such other manner as may appear most likely to secure the accuracy of the returns.

33. The results of the enumeration of the classes referred to in Rules 30, 31 and the first part of Rule 28 will be kept separate, so as to lessen the chance of inaccuracy in the returns of the resident population of each district. The abstract form No. 5 is intended for wandering tribes. The accuracy or otherwise of the enumeration of these classes will be specially noticed in the Collector's reports.

34. The influence and co-operation of zemindars and large landed proprietors must be secured for the census of the population of their estates. Such persons will, of course, be allowed to make returns of the residents of their own houses, and the same privilege may be conceded to all persons of respectability at the collector's discretion. The necessary forms, &c., will, of course, be provided beforehand.

35. The Military Department will arrange for soldiers present with their regiment and for all residents within the limits of cantonments and stations under military jurisdiction.

36. The officers employed in the actual work of enumeration will be warned to enter themselves in the returns.

37. Europeans and Eurasians are to be included in the census.

38. Statements 3 to 12 (both inclusive) are to be forwarded to the Board. Statements 1 and 2 are to be retained in the Collector's Office.

(Signed) J. D. SIM,
Sub-Secretary.

ANNEXURE II

Location Code numbers of Districts and taluks

Code No.	District	Name of taluk	Code No.
1	2	3	4
1.	Madras		
2.	Chingleput	Ponneri	1
		Tiruvallur	2
		Tiruttani	3
		Sriperumbudur	4
		Saidapet	5
		Chingleput	6
		Kanchipuram	7
		Maduranthakam	8
3.	North Arcot	Arkonam	1
		Walajapet	2
		Gudiyatham	3
		Tiruppattur	4
		Vellore	5
		Arni	6
		Cheyyar	7
		Wandiwash	8
		Polur	9
		Chengam	10
		Tiruvannamalai	11
4.	South Arcot	Gingee	1
		Tindivanam	2
		Villupuram	3
		Tirukkoyilur	4
		Kallakurichi	5
		Vriddhachalam	6
		Cuddalore	7
		Chidambaram	8
5.	Salem	Hosur	1
		Krishnagiri	2
		Harur	3
		Dharmapuri	4
		Omalur	5
		Yercaud	6
		Salem	7
	Salem	Sankari	8
		Tiruchencode	9
		Rasipuram	10
		Attur	11
		Namakkal	12
6.	Coimbatore	Bhavani	1
		Gopichettipalayam	2
		Erode	3
		Dharapuram	4
		Palladam	5
		Avanashi	6
		Coimbatore	7
		Pollachi	8
		Udumalpet	9
7.	Nilgiri	Gudalur	1
		Ootacamund	2
		Coonoor	3
8.	Madurai	Dindigul	1
		Palni	2
		Kodaikanal	3
		Periyakulam	4
		Nilakkottai	5
		Melur	6
		Madurai	7
		Tirumangalam	8
9.	Tiruchirapalli	Perambalur	1
		Udaiyarpalayam	3
		Lalgudi	2
		Musiri	4
		Karur	5
		Kulittalai	6
		Tiruchirapalli	7
		Kulathur	8
		Alangudi	9
		Tirumayam	10

Code No.	District	Name of taluk	Code No.
1	2	3	4
10.	Thanjavur	Sirkali ...	1
		Mayuram ...	2
		Kumbakonam ...	3
		Nannilam ...	4
		Papanasam ...	5
		Thanjavur ...	6
		Orthanad ...	7
		Mannargudi ...	8
		Nagapattinam ...	9
		Tiruthuraipundi ...	10
		Pattukkottai ...	11
		Arantangi ...	12
11.	Ramanathapuram	Tirupattur ...	1
		Sivaganga ...	2
		Tiruvadanai ...	3
		Paramakudi ...	4
		Ramanathapuram ...	5
	Ramanatha-puram	Mudukulathur ...	6
		Aruppukkottai ...	7
		Sattur ...	8
		Srivilliputtur ...	9
12.	Tirunelveli	Sankaranayinarkoil ...	1
		Kovilpatti ...	2
		Srivaikuntam ...	3
		Tirunelveli ...	4
		Tenkasi ...	5
		Shencottah ...	6
		Ambasamudram ...	7
		Nanguneri ...	8
		Tiruchendur ...	9
13.	Kanyakumari	Vilavancode ...	1
		Kalkulam ...	2
		Thovala ...	3
		Agasteeswaram ...	4

ANNEXURE

Extracts from the Andhra Pradesh and Madras (Alteration of Boundaries) Act, 1959

Transfer of territories

5. Changes of territorial divisions in Madras—(1) The territories which immediately before the appointed day were comprised in Sathyavedu firka of Ponneri taluk and Uttukkottai firka of Tiruvallur taluk but are not transferred by virtue of section 3 to the State of Andhra Pradesh shall be included in and form part of Gummudipundi firka of Ponneri taluk.

(2) The territories specified in Parts I and II of the Second Schedule shall be included in and form a separate taluk to be known as Tiruttani taluk of Chingleput district and in that taluk, the territories specified in Part II of the Schedule shall form a separate firka to be known as Kanakammachatram firka.

(3) The territories specified in Parts III, IV, V, VI, VII and VIII of the Second Schedule shall respectively be included in and form part of-

(a) Mappedu firka of Tiruvallur taluk of Chingleput district;

(b) Parangi firka of Arkonam taluk of North Arcot District;

(c) Arkonam firka of Arkonam taluk of North Arcot district;

(d) Ranipet firka of Walajapet taluk of North Arcot district;

(e) Gudiyattam East firka of Gudiyattam taluk of North Arcot district; and

(f) Vaniyampadi firka of Tirupattur taluk of North Arcot district.

The First Schedule

Territories transferred from the State of Madras to the State of Andhra Pradesh

(Any reference in the Schedule to a Census Code number in relation to a village means the code number assigned to that village in the Census of 1951.)

PART I

1. The following villages in Ponneri taluk of Chingleput District:

Serial number	Name		Census Code number
1.	Santhavelur	...	1
2.	Ayyavaripalayam	...	2
3.	Ambur	...	3
4.	Nelvoy	...	4
5.	Marudavada	...	5
6.	Kalathur	...	6
7.	Gudalavaripalayam	...	7
8.	Narasingapura Agraharam	...	8
9.	Karipakkam	...	9
10.	Pulivallam	...	10
11.	Kadur	...	11
12.	Bangaruthimma Boopalapuram	...	12
13.	Vittyapalayam	...	13
14.	Varadayapalam	...	14
15.	Kambakkam	...	15
16.	Arudur	...	16
17.	Bathalavallam	...	17
18.	Kummarapeddavenkatapuram		18
19.	Chedulapakkam	...	19
20.	Vidiakadu	...	20
21.	Shola Agraharam	...	21
22.	Silamathur	...	22
23.	Matterimitta	...	23
24.	Thondur Agraharam	...	24
25.	Chintamani Thangal	...	25
26.	Chinnapudi Agraharam	...	26
27.	Enadivettu	...	27
28.	Racherla	...	28
29.	Kovurpadu	...	29
30.	Mopurpalli	...	30
31.	Chengambakkam	...	31
32.	Chiddama Agraharam	...	32
33.	Ramachandrapuram	...	33
34.	Thondambattu	...	34
35.	Ambikapuram	...	35
36.	Pandur	...	36
37.	Padirikuppam	...	37
38.	Chinnapandur	...	38

Serial number	Name	Census Code number
39.	Madanapalayam ...	39
40.	Gollavaripalayam ...	40
41.	Chervi ...	41
42.	Appayapalayam ...	44
43.	Mallavarpalayam ...	46
44.	*Samurthikandigai* ...	53
45.	Repallavada ...	54
46.	Rajagopalapuram ...	55
47.	Balagopalapuram ...	56
48.	Ranganathapuram ...	57
49.	Dwarakapuram ...	58
50.	*Rallakuppam* ...	59
51.	Kolladam ...	60
52.	Pravalaverneswarapuram ...	61
53.	Mettupalayam ...	62
54.	Govindapuram ...	63
55.	Vanalur ...	64
56.	Lakshmipuram ...	65
57.	Peddaitlivakkam ...	66
58.	Chinnaittivakkam ...	67
59.	Irugalam ...	68
60.	Arur .	69
61.	Alamelumangapuram ...	130
62.	Venkatarajukandigai ...	131
63.	Kadirvedu ...	135
64.	Sirunambudur ...	136
65.	Peradam ...	137
66.	Ambakkam ...	138
67.	Pudukuppam ...	139
68.	Madanambedu ...	140
69.	Sathiavedu ...	141
70.	Kothamarikuppam ...	142
71.	Madanancheri ...	144
72.	Thondukuli ...	145

2. The entire forest areas situated in Ponneri taluk of Chingleput district and lying to the west of any of the villages specified in item 1.

3. The following villages in Tiruvallur taluk of Chingleput district:

Serial number	Name	Census Code number
1.	Mudiyur ...	1
2.	Rappalapattu ...	2
3.	Sadasivasankarapuram ...	3
4.	Jambukesavapuram ...	4
5.	Vengalampattu ...	5
6.	Vellur ...	6
7.	Beerakuppam ...	7
8.	Lakshmikantapuram ...	8
9.	Kadivedu ...	9
10.	Janakipuram ...	10
11.	Rajulukandigai ...	11
12.	Anamathukandigai ...	12
13.	Vajjarvarikandigai ...	13
14.	Kannavaam ...	14
15.	Tirupuranthakapuramkottai ...	15
16.	*Chinthalagunta* ...	*16*
17.	Ramanathapuram alias Chengalvarayakandigai ...	17
18.	Naidugunta ...	18
19.	Bhoopathiswarapuram ...	19
20.	Pisatoor ...	20
21.	*Appambattu* ...	*21*
22.	Ramagiri ...	22
23.	Krishnapuram ...	23
24.	Kalancheri ...	24
25.	Nagalapuram ...	25
26.	Vembakkam ...	26
27.	Kottakkadu ...	27
28.	Nandanam ...	28
29.	Balitagodiyambedu ...	29
30.	Baijagandigai ...	30
31.	Mavettimolakandigai ...	31
32.	Decrovy ...	32
33.	Velur ...	33
34.	Rajanagaram ...	34
35.	Alapakkam ...	35
36.	Alappakkamkandigai ...	36
37.	Urur ...	37
38.	Agaram ...	38
39.	Devadarikondiyambedu ...	39
40.	Vengalathur ...	40
41.	Kuppamkandigai ...	41
42.	Pillarikandigai ...	42
43.	Kottur ...	43
44.	Sidderajulkandigai ...	44
45.	Pulipedu alias Govardhanagiri ...	45
46.	Mithilapuram ...	46
47.	Obularajukandigai ...	47
48.	Narayanarajukandigai ...	48
49.	Karur alias Krishnagiri ...	49
50.	Adivikodiyambedu ...	50

Serial number	Name		Census Code number
51.	Pulikundram	...	51
52.	Adivisankarapuram	...	52
53.	Krishnapuramkandigai	...	53
54.	Silamathur alias Bangola	...	54
55.	Nallappanaidu Kandigai	...	55
56.	Yalur Ravannavaradanna Kandigai	...	56
57.	Chinnapattu	...	57
58.	Subbanaikdukandigai	...	58
59.	Achama Kandigai	...	59
60.	Karanai	...	60
61.	Pallampattadai	...	61
62.	Krishnapuram Agraharam	...	62
63.	Surattupalli	...	63
64.	Ururpet	...	64
65.	Thimmanambakkam	..	65
66.	Athur	...	66
67.	Sivagiri	...	67
68.	Hanumanthapuram	...	73
69.	Alagirikandigai	...	74
70.	Shamshedbahadhurpet	...	75
71.	Sriramapuram	...	76
72.	Siddavinayakapuram	...	77
73.	Chengalarayapuram	...	78
74.	Polichettigunta	...	80
75.	Desikuppam	...	84
76.	Senneri	...	85

4. The entire forest area lying to the north of the village specified in item 3 and the forest area lying to the north of the village Desikuppam (Census Code No. 84)

PART II

The following villages in Krishnagiri Taluk of Salem district :

Serial number	Name		Census Code number
1.	Onnappanaikenkothur	...	18
2.	Thaligaraharam	...	23
3.	Kotamaganapalli	...	24

The Second Schedule

(See Sections 3 (b) and 5)

Territories transferred from the State of Andhra Pradesh to the State of Madras.

(Any reference in this Schedule to a Census Code number in relation to a village means the Code number assigned to that village in the Census of 1951.)

PART I

The following villages in Puttur taluk of Chittoor district :

Serial number	Name		Census Code number
1.	Gopalakrishnapuram	...	134

2. The following villages in Tiruttani taluk in Chittoor district :

Serial number	Name		Census Code number
1.	Veligaram	...	5
2.	Melkalpatteda	...	6
3.	Pallipat	...	7
4.	Surarajupatteda	...	8
5.	Rangepalle	...	9
6.	Kolathur	...	10
7.	Kolathur-Ramiakhandriga	...	11
8.	Nediyam	...	12
9.	Aravasipatteda	...	13
10.	Samanthavada	...	14
11.	Karimbedu	...	15
12.	Kesavarajupuram	...	16
13.	Ramachandrapuram	...	17
14.	Chinnatimmarajupatteda	...	18
15.	Venkatarajukuppam	...	19
16.	Sangeethakuppam	...	20
17.	Thirumalrajupet	...	21
18.	Thirunadharajupuram	...	22
19.	Kumararajupeta	...	23
20.	Melapudi	...	24
21.	Reddipalli Subbaraokhandriga	...	25
22.	Puranam Sanjeevirayunikhandriga	...	26
23.	Punyam	...	27
24.	Patnam Seshayyakhandriga	...	28
25.	Kadapanthangal	...	29
26.	Kaverirajupeta alias Sri Kaverirajulungaripet	...	30
27.	Bommarajupeta	...	31
28.	Gollalakuppam	...	32
29.	Chandrappanaidukhandriga	...	33
30.	Chinnamudipalli	...	34

Serial number	Name		Census Code number
31.	Kesavarajukuppam	...	35
32.	Nallattur	...	45
33.	Chivvada	...	46
34.	Siddanthipuram	...	47
35.	Kondapuram	...	48
36.	Proddatturpet (non-city urban)	...	49
37.	Ragimanukhandrigai	...	50
38.	Pandaravedu	...	51
39.	Gantavarikuppam	...	52
40.	Sitaramapuram	...	53
41.	Vadakuppam	...	54
42.	Karlambakkam	...	55
43.	Konasamudram	...	56
44.	Kakalur	...	57
45.	Vengalarajukuppam	...	58
46.	Ramapuram	...	59
47.	Poonimangadu	...	60
48.	Venkatapura Agraharam	...	61
49.	Kodivalasa	...	63
50.	Athimanjeri	...	64
51.	Venkatapuram	...	65
52.	Kothakuppam	...	66
53.	Petakandriga	...	67
54.	Jangalapalli	...	68
55.	Nedigallu	...	69
56.	Ponbadi Gollakuppam	...	70
57.	Kodanda Ramapuram	...	71
58.	Nemali	...	72
59.	Madduru	...	74
60.	Chinna Athimanjeri	...	79
61.	Nochili	...	81
62.	Keechalam	...	82
63.	Ramasamadram	...	83
64.	Ulchiguruvarajukhandriga	...	84
65.	Konugarikuppam	...	85
66.	Gowripuram Badrarajukhandriga	...	86
67.	Alimelumangapuram	...	87
68.	Singarajapuram	...	88
69.	Thayamambapuram	...	89
70.	Pompadi alias Pommadi	...	90
71.	Korakuppam	...	97
72.	Narasampeta	...	99
73.	Rajanagaram Santhayatham	...	100
74.	Kannikambapuram	...	101
75.	Balakrishnapuram	...	102

Serial number	Name		Census Code number
76.	Dwarakapuram	...	103
77.	Krishnamarajukuppam	...	104
78.	Venugopalapuram	...	105
79.	Royasam Venkatakrishnayya Khandriga	...	106
80.	Krishnasamudram	...	107
81.	Tiruvengalanadharajapuram	...	109
82.	Ramachandrapuram	...	110
83.	Talavedu	...	111
84.	Narayanasamudram Agraharam	...	112
85.	Balakrishnapuram	...	120
86.	Murukambattu	...	121
87.	Subramanyapuram	...	123
88.	Ramachandrapuram	...	124
89.	Sathrunjayapuram	...	125
90.	Medinipuram	...	126
91.	Srinivasapuram	...	127
92.	Srinivasayya Khandriga	...	128
93.	Gowripuram Chinnasubbarajukhandriga	...	135
94.	Siddayyagunta Khandriga	...	136
95.	Madirajuperumalraju Khandriga	...	137
96.	Elavarthimumnalaraju Khandriga	...	138
97.	Chiralagurrappa Khandriga	...	139
98.	Nallur Perumalraju Khandriga	...	140
99.	Ulchirangaraju Khandriga	...	141
100.	Chinthalangunta Khandriga	...	142
101.	Nalluru Venkataraju Khandriga	...	143
102.	Sirugummi	...	144
103.	Veeranaidupalem	...	145
104.	Rajakallarapuram	...	146
105.	Suryanagaram	...	147
106.	Shotriam Bommarajapuram	...	148
107.	Tekkulur	...	149
108.	Singasamudram	...	161
109.	Perumkanchi Narasimhuni Khandriga	...	162
110.	Veerakaverirajupuram	...	163
111.	Erramasetti Narasimhuni Khandriga	...	164
112.	Kumara Bommarajapuram	...	165
113.	Chengalvapuram Agraharam	...	166
114.	Dharanivarahapuram	...	167

Serial number	Name	Census Code number
115.	Velanjeri ...	168
116.	Srinivasapuram ...	169
117.	Sandayatham Anjaneyapuram	175
118.	Anjaneyapuram ...	176
119.	Pakala Narayana Reddikhandriga ...	178
120.	Rajanagaram (including in village No. 100). ...	179
121.	Thaduru ...	180
122.	Thalari Tangal ...	181
123.	Errappanaidukhandriga ...	182
124.	Veerakanellore ...	183
125.	Notterikhandriga ...	184
126.	Makamambapuram ...	185
127.	Narayanapuram ...	186
128.	Kasinadhapuram ...	187
129.	Pattabiramapuram ...	188
130.	Velayudhakuppam ...	189
131.	Vinayakapuram ...	190
132.	Kadananagaram ...	192
133.	Yagnapuram ...	193
134.	Janagarajakuppam ...	194
135.	Anandhavallipuram ...	196
136.	Tyagapuram ...	197
137.	Mohinipuram ...	198
138.	Appukondayakhandriga ...	199
139.	Mutyalavaripalle ...	200
140.	Lakshmipuram ...	201
141.	Raghavanaidukuppam ...	202
142.	Ayyavarinaidu Khandriga ...	203
143.	Kondapuram ...	204
144.	Ammavarikuppam ...	205
145.	Narayanapuram ..	206
146.	Mosur ...	207
147.	Vanganur ...	208
148.	Krishnakuppam ...	209
149.	Chengalvarayudukhandriga ...	210
150.	Srigiriajubadrarajukhandriga ...	211
151.	Madurapuram ...	212
152.	Changareddi Narayanareddikhandriga ...	213
153.	Santhana Venugopalapuram ...	214
154.	Koramangalam ...	215
155.	Pratapa Uddandamakarajapuram ...	216
156.	Agoor ...	217
157.	Amruthapuram ...	218

Serial number	Name	Census Code number
158.	Tiruttani (Non-city urban) ...	219
159.	Tiruttani (rural) ...	220
160.	Meldevadhanam ...	221
161.	Keeldevadhanam ...	222
162.	Kaveripuram ...	226
163.	Khandapuram ...	227
164.	Ramakrishnarajupet	228
165.	Bhadrarajukhandriga ...	229
166.	Srikrishnapuram ...	230
167.	Thummalcheruvukhandriga ...	231
168.	Maharajapuram ...	232
169.	Akkachikuppam ...	233
170.	Beerakuppam ...	234
171.	Perumal-manyam Khandriga ...	235
172.	Veerakaverirajapuram ...	236
173.	Kanchiguruvarajakhandriga ...	237
174.	Devasenapuram ...	240
175.	Mahankalipuram ...	242
176.	Ramajosyulukhandriga ...	243
177.	Balapuram ...	244
178.	Sreekalikapuram ...	245
179.	Chandravilasapuram ...	246
180.	Ramapura Agraharam ...	247
181.	Govatsapuram ...	248
182.	Srikrishnapuram ...	249
183.	Velurukrishnamanaidu khandriga ...	250
184.	Lakshminarashimhapuram ...	251
185.	Thondamanatinarayanareddi Khandriga ...	242
186.	Senagalathur Agraharam ...	253
187.	Cherukunur ...	254
188.	Perumathangal ...	255
189.	Kannikapuram ...	256
190.	Valliyammapuram ...	257
191.	Padmapuram ...	258
192.	Karthikeyapuram ...	259
193.	Perumalthangal ...	260
194.	Dananeri ...	266
195.	Swethavarahapuram ...	267
196.	Vellatur ...	268
197.	Ammaneri ...	269
198.	Kondapuram ...	270
199.	Venkataperumalrajupuram ...	272
200.	Thirnadharajapuram ...	275
201.	Veeramangalam ...	277
202.	Audivarahapuram ...	278

Serial number	Name	Census Code number
203.	Mambakkam	279
204.	Peddakadambur	280
205.	Peddanagapudi	281
206.	*Devakipuram*	*282*
207.	Kasavarajupet	283
208.	Bikkasanivengamanaidu khandriga	284
209.	Chinnakadambur	285
210.	Nayudu Thopu	289
211.	Vediyangadu	291
212.	Devalambapuram Makarajupuram	292
213.	*Chinnanagapudi*	293
214.	Eeurumbi alias Aswarevanthapuram	294
215.	Viranthur	295
216.	Ayyaneri	296
217.	*Singarajapuram*	*300*
218.	Gopalapuram	301
219.	Chinnaramapuram	302
220.	Peddaramapuram	303
221.	Chanurmallavaram	304
222.	Koleri alias Sahasrapadanapuram	305
223.	*Mylarwada*	*311*
224.	Makamambapuram	312
225.	Tirumalambapuram	313
226.	Parabhayankarapuram	314
227.	Meesaragantapuram	315
228.	Makamambapuram	316
229.	Nilotpalapuram	317
230.	*Padmapuram*	*318*
231.	Paivalasa	319
232.	Katarikuppam	320

PART II

The following villages in Tiruttani taluk of Chittoor district :

Serial number	Name	Census Code number
1.	Arumbakkam	75
2.	Arumgolam	*91*
3.	Thirukholamkhandriga	92
4.	*Mamandur*	*113*
5.	Nekkiniagraharam	115
6.	Nekkinipeta	116
7.	Venugopalakrishnapuram	*117*
8.	Nedambaram	129
9.	*Raghunadhapuram*	*130*
10.	Sithapuram	131
11.	Patramthangal	132
12.	Panapakkam	133
13.	Arcotkuppam	150
14.	Gulur	*151*
15.	Kanjipadi	153
16.	*Rangapuram*	*153*
17.	Nabaloor	170
18.	Kunnathur	171
19.	Illupur	172
20.	Muddukondapuram	173
21.	Ramapuram	*223*
22.	Kaverirajapuram	238
23.	*Kurmavilasapuram*	*239*
24.	Ramlingapuram	261
25.	Parasapuram	262
26.	Venugopalapuram	263
27.	Veeraraghavapuram	286
28.	Tiruvelangadu	*287*
29.	Narthavada	288
30.	*Dhanushayapuram*	*290*
31.	Palayanur	297
32.	Bhagavatha Pattabhiramapuram	298
33.	Pulavanalluru	299
34.	Banapuram	*306*
35.	Vyasapuram	307/1 *and* 307/2
36.	Rajapadmapuram	308
37.	Rajaratnapuram	309
38.	Jagirmanglam	310
39.	Shrotrium Pattabhiramapuram alias Chinnamapet	*324*
40.	Tholudavoor	325
41.	*Marudavallipuram*	*326*
42.	Manoor	327
43.	Kuppam Khandriga	328
44.	Harishchandrapuram	329
45.	Lakshmivilasapuram	330
46.	Saunakapuram	331
47.	Orathur	332
48.	*Paakasala*	*333*
49.	Japtishrotrium Ramapuram	334

Serial number	Name		Census Code number
50.	Peddakalakattur	...	335
51.	Chinnamandali	...	336
52.	Kalambakam	...	338

PART III

The following village in Tiruttani taluk of Chittoor district:

Serial number	Name		Census Code number
1.	Chitrambakkam	...	337

PART IV

The following villages in Tiruttani taluk of Chittoor district:

Serial number	Name		Census Code number
1.	Perumalrajupeta	...	321/1 and 321/2
2.	Thandlam	...	322
3.	Nandhimangalam	...	323

PART V

The following hamlets in Tiruttani taluk of Chittoor district:

Serial number	Name		Census Code number
1.	Ambarishapuram	...	307/3
2.	Sukapuram	...	307/4

PART VI

The following villages in Chittoor taluk of Chittoor district:

Serial number	Name		Census Code number
1.	Avularangaiahpalle	...	248
2.	Gollavaripalle	...	277
3.	Thangal	...	279
4.	Balekuppam	...	280
5.	Ammavaripalle	...	337
6.	Kondamanayanipalem	...	351
7.	Paramasattu	...	352
8.	Madandakuppam	...	353
9.	Gollapalle	...	354
10.	Mahimandalam	...	363
11.	Perumallakuppam	...	364
12.	Erukkampet	...	365
13.	Vellimalai	...	366
14.	Mutharasikuppam	...	368
15.	Vennampalle	...	369
16.	Kodukkanthangal	...	370
17.	Elayanellore	...	371
18.	Thempalle	...	372
19.	Sripadanellore	...	373
20.	Veppalai	...	374
21.	Melpadi	...	375

2. The entire forest area lying to the north and south of the village of Mahimandalam (Census Code No. 363)

PART VII

The following villages in Chittoor taluk of Chittoor district:

Serial number	Name		Census Code number
1.	Dakshinapathapalle	...	290
2.	Puttavaripalle	...	295
3.	Rangasamudram	...	297
4.	Vidyasankarapuram	...	298
5.	Viludonapoliem	...	299
6.	Varadareddipalle	...	300
7.	Veerisettipalle	...	301
8.	Paradarami	...	302

2. The forest area lying between the above villages and Gudiyattam taluk.

PART VIII

The following areas in Palmaner taluk of Chittoor district:

(a) The area surrounding the Javvajiramasamudram tank bounded:

(i) on the east, by the existing boundary between Javvajiramasamudram village included in Alasandapuram village (Census Code No. 33) of Tiruppattur taluk of North

Arcot district of Madras State and the State of Andhra Pradesh;

(ii) on the south, by the existing boundary between the said Javvajiramasamudram village and the State of Andhra Pradesh and its continuation directly westwards to the top of the adjoining hill;

(iii) on the west, by a line running along the top of the two hills lying to the west of the said tank; and

(iv) on the north, by a line running along the peaks of the four hills lying to the north of the said tank and joined up to the north-west corner of the said Javvajiramasamudram village.

(b) The area surrounding the Gollapalle tank bounded:—

(i) on the east and the south, by the existing boundary between Gollapalle village included in Alasandapuram village (Census Code No. 33) of Tiruppattur taluk of North Arcot district of Madras State and the State of Andhra Pradesh;

(ii) on the west, by a line running along the bottom of the hill situated to the west of the said tank; and

(iii) on the north, by a line running along the bottom of the hill situated to the north of the said tank.

CHAPTER II

A GENERAL SURVEY

Physical features

Madras State is situated at the south-eastern extremity of the Indian peninsula. Bounded on the north by Mysore and Andhra Pradesh, on the east by the Bay of Bengal, on the south by the Indian Ocean and on the west by Kerala State, it has a coastline of 620 miles and a land boundary of 750 miles. It lies between 8° 5′ and 13° 35′ of northern latitude and 76° 15′ and 80° 20′ of eastern longitude. With an area of 50,154.7 square miles or 129,900.6 square kilometres, it is the eleventh State in India in area, forming 4.08% of the Union's area. It ranks sixth in population having 7.67% of the total population. On 1st March, 1961, its population stood at 33,686,953. Its density is 672. It has 339 towns. 992 females live in the State for every 1,000 males. The urban population of the State is 8,990,528 and the rural population 24,696,425. There are 14,124 inhabited villages in the State. Pondicherr Area with 113.4 square miles and Karaikal with an area of 57.6 square miles are enclaved in the State.

Madras State has definite physical and climatic characteristics which make it a natural geographical region. It has a rhomboidal shape bordered by the ramparts of the Ghats, the Eastern and the Western on the north-western and western sides, the Bay of Bengal on the eastern and the Palk Strait and the gulf of Mannar on the south-eastern sides. The Tamil country has been described by O. H. K. Spate as the "Carnatic of the 18th Century Franco-British Wars". It falls under two parts:

(a) The coastal plain of South India
(b) The hilly western parts

Topography

2. Topographically, several distinct divisions can be found in the State. Parallel to the coast and gradually rising from it is the broad strip of plain country. It can further be sub-divided into the Coromandal plains comprising the districts of Chingleput, South Arcot and North Arcot, the alluvial plains of the Cauvery delta extending over Thanjavur and part of Tiruchirapalli districts and the dry southern plains in Madurai, Ramanathapuram and Tirunelveli districts. It extends a little beyond Western Ghats in Kanyakumari district. For administrative purposes, it has been divided into 13 districts including Madras City. The whole State excluding the City has been divided into 103 taluks.

The details of the area and population of the districts and taluks are given below :

TABLE II-1

Area and population of districts and taluks comprised in districts

Serial No.	District	Area in Sq. miles (in Sq. Km. within brackets)	Population	Taluks
1	2	3	4	5
1	Madras City	48.9 (126.7)	1,729,141	...
2	Chingleput	3,155.1 (8,171.7)	2,196,412	Ponneri Tiruvallur Tiruttani Sriperumbudur Saidapet Chingleput Kanchipuram Maduranthakam

TABLE II-1 (Contd.)

Area and population of districts and taluks comprised in districts

Serial No.	District	Area in Sq. miles (in Sq. Km. within brackets)	Population	Taluks	
1	2	3	4	5	
3	North Arcot	4,690.4 (12,148.2)	3,146,326	Arkonam Walajapet Gudiyatham Tiruppattur Vellore Arni Cheyyar Wandiwash Polur Chengam Tiruvannamalai	(11)
4	South Arcot	4,208.1 (10,899.0)	3,047,973	Gingee Tindivanam Villipuram Tirukkoyilur Kallakurichi Vriddhachalam Cuddalore Chidambaram	(8)
5	Salem	7,051.2 (18,262.6)	3,804,108	Hosur Krishnagiri Harur Dharmapuri Omalur Yercaud Salem Sankari Tiruchengode Rasipuram Attur Namakkal	(12)
6	Coimbatore	6,024.6 (15,603.7)	3,557,471	Bhavani Gopichettipalayam Erode Dharapuram Palladam Avanashi Coimbatore Pollachi Udumalpet	(9)

TABLE II-1 (Contd.)

Area and population of districts and taluks comprised in districts

Serial No.	Districts	Area in Sq. miles (in Sq. Km. within brackets)	Population	Taluks	
1	2	3	4	5	
7	Nilgiri	981.7 (2,542.5)	409,308	Gudalur	
				Ootacamund	
				Coonoor	(3)
8	Madurai	4,868.9 (12,610.4)	3,211,227	Dindigul	
				Palni	
				Kodaikanal	
				Periyakulam	
				Nilakkottai	
				Melur	
				Madurai	
				Tirumangalam	(8)
9	Tiruchirapalli	5,505.2 (14,258.5)	3,190,078	Perambalur	
				Udaiyarpalayam	
				Lalgudi	
				Musiri	
				Karur	
				Kulittalai	
				Tiruchirapalli	
				Kulathur	
				Alangudi	
				Tirumayam	(10)
10	Thanjavur	3,739.0 (9,684.0)	3,245,927	Sirkali	
				Mayuram	
				Kumbakonam	
				Nannilam	
				Papanasam	
				Thanjavur	
				Orathanad	
				Mannargudi	
				Nagapattinam	
				Tiruthuraipundi	
				Pattukkottai	
				Arantangi	(12)
11	Ramanathapuram	4,828.6 (12,506.1)	2,421,788	Tirupattur	
				Sivaganga	
				Tiruvadanai	
				Paramakudi	
				Ramanathapuram	
				Mudukulathur	

TABLE II-1 (Contd.)

Area and population of districts and taluks comprised in districts

Serial No.	District	Area in Sq. miles (in Sq. Km. within brackets)	Population	Taluks	
1	2	3	4	5	
	Ramanathapuram (Contd.)			Aruppukkottai Sattur Srivilliputtur	(9)
12	Tirunelveli	4,407.5 (11,415.4)	2,730,279	Sankaranayinarkoil Kovilpatti Srivaikuntam Tirunelveli Tenkasi Shencottah Ambasamudram Nanguneri Tiruchendur	(9)
13	Kanyakumari	645.5 (1,671.8)	996,915	Vilavancode Kalkulam Thovala Agasteeswaram	(4)
	MADRAS STATE	50,154.7 (129,900.6)	33,686,953		

TABLE II-2

Density of population and number of towns in districts

Sl. No.	District	Density of population per sq. mile	Number of towns
1	2	3	4
1	Madras City	35,339	1
2	Chingleput	696	34
3	North Arcot	671	30
4	South Arcot	724	20
5	Salem	539	25
6	Coimbatore	590	34
7	Nilgiri	417	13
8	Madurai	660	32
9	Tiruchirapalli	579	33
10	Tanjavur	868	34
11	Ramanathapuram	502	35
12	Tirunelveli	619	44
13	Kanyakumari	1,544	4

Two Natural Divisions

3. The vast flat country along with eastern coastline and the mountainous region in the north and the west are two natural divisions of the State. The Eastern Ghats enter Madras State from Andhra Pradesh in the north and cuts across the State and merge in the Nilgiri hills. The region is bounded on the south-west by the crest of the Cardamom hills and on the north-west by the slopes of the Plateau. The region is in the form of a rhombus and the longer diagonal of it stretches from the Pulicat lake in the north to Cape Comorin in the south and the shorter diagonal from the Palghat gap in the west to Point Calimere in the east.

Hills

4. The formation of the hilly ranges has determined its climate, its rainfall, rivers and irrigation, and the distribution of languages. Along the whole length of the western part, at a

distance from the sea varying from 50 to 100 miles runs the range of the Western Ghats, a steep and rugged mass averaging 4,000 feet and rising to 8,000 feet. The Palghat gap averaging 15 miles in width is the only marked break in this great mountain wall. The ghats on either side of this gap attain their maximum height in the hill groups of the Nilgiri and the Anaimalais, the lofty Palnis being an off-shoot of the latter. Another less important off-shoot of the Ghats is found in the Varushanad and Andipatti ranges in the south. While the Anaimalais lie in Coimbatore district, the Palnis lie in Madurai district.

The other prominent hill groups comprise the Javadis, the Shevaroys, the Kalrayans and the Pachaimalais which form a chain of low flat-topped hills. These ranges continue south of the Cauvery in an even more broken formation and eventually meet the Cardamom hills in Madurai district. A plateau is found between these hills and the Western Ghats with an average elevation of 1,000 feet rising westward. The river Cauvery divides the valley into two parts, one comprising most of Salem district and part of North Arcot district and the other comprising most of Coimbatore district. The narrow mountain strip of the western boundary has an average height of 4,000 feet and in the Ootacamund area of the Nilgiri district the highest peak of Doddabetta is 8,650 feet above sea level. The hill groups north of Cauvery having the same trend as the Ghats forming the north-eastern boundary, appear to be one continuous block which has been separated into three main groups by the rivers, Ponnaiyar and Vellar. The Vaigai valley separates the Madurai hill groups from the Varushanad and Andipatti ranges. However, the latter appear to be a continuation of the former hill groups. North of Palar, smaller and even more broken hills link up with the tail of the Nagari hills in Cuddapah. One characteristic feature of the hills of Madras State is that they have flattish surfaces at the heights. In general, the summits are higher than those in the Mysore plateau. For instance, the Javadis have 3,600-3,800 feet and the Shevaroys 5,000-5,400 feet.

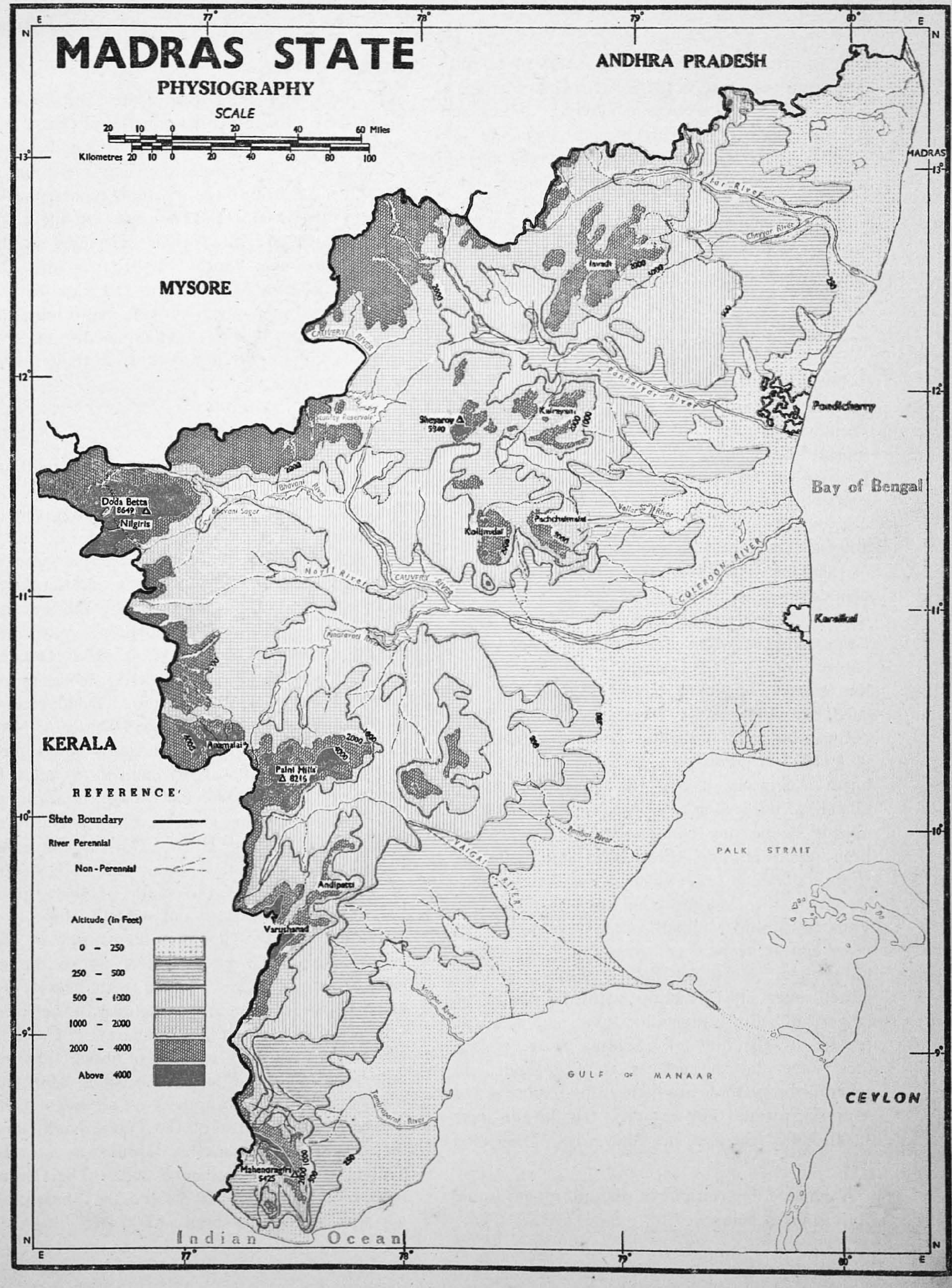
A detailed description of the hill ranges in the State is given below:

Eastern Ghats

5. Beginning in Orissa State, the Eastern Ghats pass through Ganjam district of Orissa and run through all the districts lying between Ganjam and Nilgiri plateau. Their elevation is 2,000 feet on the average and their highest peaks are less than 6,000 feet. The rocks of the ghats vary in structure and origin depending on the country through which they pass. In the districts of North Arcot, Salem and Coimbatore, the range is very much broken and reaches the Biligiri-Rangam hills in Coimbatore district. No river of any importance rises from these ranges in Madras State.

Western Ghats

6. The Western Ghats are 1,000 miles in length and form the western boundary of the Deccan and the water-shed between the rivers of Peninsular India. They run southward at a distance of 50 to 100 miles from the sea until they terminate at Cape Comorin, the southernmost extremity. They are joined by the Eastern Ghats and at the point of junction have formed the high plateau of the Nilgiri on which Ootacamund, Coonoor, Wellington and Kotagiri are located. The highest peaks are Doddabetta—8,650 feet and Mukurti — over 8,000 feet. Near Coimbatore district, the hill range is interrupted by the Palghat gap, approximately 15 miles in width and hardly 1,000 feet above the sea level. To the south of this gap, the range is known as Anaimalai (Elephant Hills). On the east is the Palni hills on which is found the hill station of Kodaikanal. To the south of the gap of Palghat, both the eastern and western slopes are steep and rugged. The range here varies in elevation from 3,000 to 8,000 feet above the sea level. The slopes are covered with heavy evergreen forests. These are the sources of the rivers Cauvery, Vaigai and Tambraparni. The Nilgiris form a compact plateau of about 1,000 sq. miles with a summit level of 6,000 to 8,000 feet rising with extreme abruptness on all sides. The southern most flanks of the Palnis overlooking the Vaigai are remarkably abrupt as are the Cardamom and Varushanad hills. The Cardamom hills lie between 10° N and the Shencottah gap with an elevation above 6,000 feet.



MADRAS STATE
PHYSIOGRAPHY
SCALE
20 10 0 20 40 60 Miles
Kilometres 20 10 0 20 40 60 80 100
ANDHRA PRADESH
MYSORE
KERALA
MADRAS
Pondicherry
Karaikal
Bay of Bengal
PALK STRAIT
GULF OF MANAAR
CEYLON
Indian Ocean
Cauvery River
Palar River
Cheyyar River
Ponnaiyar River
Bhavani River
Bhavani Sagar
Stanley Reservoir
Noyil River
Vellar River
Coleroon River
Amaravati River
Vaigai River
Vaippar River
Tambraparni River
Javadi
Kalrayan
Shevaroy 5340
Kollimalai
Pachchaimalai
Doda Betta 8649
Nilgiris
Anamalai
Palni Hills 8216
Andipatti
Varushanad
Mahendragiri 5425
REFERENCE
State Boundary
River Perennial
Non-Perennial
Altitude (in Feet)
0 - 250
250 - 500
500 - 1000
1000 - 2000
2000 - 4000
Above 4000
77°
78°
79°
80°
13°
12°
11°
10°
9°

Shevaroy Hills

7. This range is in Salem district and occupies an area of 150 square miles. The Vanniar stream divides the range and the western portion consists of three plateaux of which the Pachaimalai (Green Hills) is the largest. On the eastern portion of the southern extremity lies the sanitorium of Yercaud located 4,500 feet above the sea level. Hardly any forest is found in the Shevaroys. Bamboo is found upto 3,000 feet and on the higher levels some teak, black-wood and sandalwood.

Palni Hills

8. The range is in Madurai district and forms part of the Western Ghats. They lie in the north-easterly direction and measure 54 miles in length and 15 miles in width. The hills occupy an area of 800 sq. miles. It can be divided into 2 divisions, the eastern part known as the lower Palnis has an average height of 3,000 to 4,000 feet and the western part is on an average 7,000 feet above sea level. The hill's health resort, Kodaikanal which is approximately 7,200 feet above sea level lies on the southern edge of the central portion of the range. While the ranges end in steep, sheer precipices in the south, they slope more gradually down the plains in the north. The upper ranges resemble the Nilgiris and have grass covered downs with thick green woods. Teak and black wood are found in the higher level forests. In Kodaikanal, English vegetables and fruits are grown. On the lower Palnis, coffee is cultivated in a large area.

Anaimalai

9. This range is in the southern part of Coimbatore district and forms part of the Western Ghats. The higher range consists of a series of plateaux 7,000 feet above sea level, running up into peaks of over 8,000 feet. They are covered with dark ever-green forests and are cut off from one another by deep valleys. The range covers 80 to 100 sq. miles. The Anaimudi peak of 8,837 feet height is the highest point in South India. The lower range on the west has an average height of 3,000 to 4,500 feet. Coffee is grown in a considerable area. The forests of the lower range contain a teak belt. The hills form an abode of numerous elephants which are used in timber-dragging. Game is plentiful and numerous wild animals are given shelter by the hills.

The Cauvery Valley

10. Though a narrow strip, the Cauvery valley stretches across the region separating the hill groups north and south of it. According to O.H.K. Spate, the Cauvery delta presents some extremely distinctive physical and human features; its power being the main factor in the remarkable growth the towns of Madras State have witnessed in the recent years. It is associated intimately with the life of all its border regions. In the east, the low-country 500 feet below, varies from 50 to 80 miles in width. This plain extends almost upto the foot of the ghats and only minor elevations can be found here and there, for instance, the Valanad hills.

Coastline

11. The State has an uninterrupted coastline of 620 miles. It includes in it the coastline of Pondicherry and Karaikal. The coastline which is the boundary on the east, is generally emergent in character with a straight and unindented trend. Recently there have heen changes leading to the accretion of land as near the mouth of the Tambraparni river or the erosion at Tarangambadi or Mahabalipuram. Though the coastline is lengthy, not a single natural harbour capable of accommodating ocean-going vessels can be found on this coast. Madras City has an artificial harbour. While it is a major port and Tuticorin a medium one, several smaller ports like Cuddalore, Nagapattinam and Colachel are found.

Major Rivers

12. The rivers of the State flow eastward from the Western Ghats and are rain-fed. No river has cut through the Western Ghats. The rivers are all of great antiquity and owing to the denudation of ages they have almost base-levelled the land. The valleys are broad and shallow and their curve of erosion is almost regular except those caused by the falls. The important rivers of the State are the Cauvery, Ponnaiyar, Palar, Vaigai and Tambraparni. The Cauvery, which is the most important river, cuts across the State,

It is perennial as it is fed by both the monsoons. With its tributaries, the Bhavani and Amaravathi, it forms the most important source of canal irrigation. Other rivers, Vaippar, Vaigai and Tambraparni run south of the Cauvery. There are several smaller rivers, but they are of less importance. They remain dry for a good portion of the year and are unsuitable for power development and major irrigation works.

Cauvery

13. The Cauvery is a great river of the South which is famous for its traditional sanctity, its picturesque scenery and its utility for irrigation. Rising on the Brahamagiri, a hill in Coorg in the Western Ghats, almost near the Arabian Sea, it travels the entire breadth of the Peninsula and forms a large delta at its mouth in the Thanjavur district. Flowing generally in a south-easterly direction across the plateau of Mysore, the river joins the Bay of Bengal in the Thanjavur district. The river is about 475 miles long and drains 28,000 sq. miles. It is known as the "Ganges of the South". The first freshes in the river occur about the middle of June. By August, the flow of water begins to decrease. Near Sivasamudram, the river running north-east branches into two channels and both the branches make a descent of 320 feet. It forms the boundary between the districts of Salem and Coimbatore for some distance. Near Tiruchirapalli, the river bifurcates at Srirangam, the northern branch, Coleroon, being the larger. From this place begins the deltaic region, mainly in Thanjavur which has been irrigated at least from the 11th century onwards when the Grand Anicut was constructed by the Chola Kings. The chief tributaries of the river in the State are Bhavani, Noyil and Amaravathi. Vennar is one of the main branches of the Cauvery. Finally, the Cauvery enters the sea by an extremely insignificant channel. Actually, the Cauvery loses itself in Thanjavur district.

Ponnaiyar

14. It rises in the Chennakesava hill east of Nandidurg in Mysore State (Kolar district). It is known as southern Pinakini to distinguish it from the northern Pinakini or Pennar which has its source closeby. It runs through the eastern part of Bangalore district and then in a south-easterly direction enters the Salem district of Madras State. At some point, north of Dharmapuri, the river turns east to South Arcot district and joins the sea at Cuddalore. The river is nowhere navigable, its bed is wide and sandy and its banks low. The Ponnaiyar river flows through Madras State for about 200 miles. Its drainage basin is 6,200 square miles. The supply in the river is less affected by rain which falls locally than by that at its source in Mysore and it comes down in short floods which rapidly dries up again. When floods occur in the river, they come down with great suddenness. When there are high floods, the river spills into the Malattar or Barren river, which was its old bed. The Malattar is now merely a small branch. The only considerable tributary of the Ponnaiyar is the Pambar which joins it on the left bank in Salem district. The river has no deltaic formation at its mouth. The river is liable to sudden high freshes. The Ponnaiyar is considered sacred and is deemed holy in the first five days of the Tamil month of Thai.

Palar

15. The Palar has its source near that of the Ponnaiyar in Nandidurg in Kolar district of Mysore State. It turns south-east and leaves Mysore in the east of Bouringpet taluk in Kolar district. It is the largest river in the Chingleput district. It flows through the North Arcot district and enters the Chingleput district some miles to the west of Kanchipuram and after cutting the district in a south-easterly direction, it falls into the sea, 3 miles to the south of Sadras in Chingleput district. The length of the river in Madras State is 183 miles. Ponni and Cheyyar are the chief tributaries of the Palar river. While the Ponni joins the Palar on the left bank in North Arcot district, the Cheyyar joins it on the other bank in Chingleput district. The towns of Vaniyambadi, Vellore, Arcot and Chingleput are located on the banks of the river.

Vaigai

16. The Vaigai is an important river of Madurai district. The origin of the river is in two streams draining the Cumbum and Varushanad valleys. The river originated in the

Varushanad hills. It bends towards the south-east near Sholavandan village and from there flows right across the centre of the district and joins the Bay of Bengal at Attangarai, east of Ramanathapuram. It receives much of the drainage from the upper and lower ranges of the Palni hills. It passes by the side of the town of Madurai before reaching the sea. The flow in the river is uncertain and insignificant. During most part of the year, the river bed is dry in Madurai and in Ramanathapuram it is dry throughout the year. Occasionally, it is in floods for a month. The supply in the river has increased in recent years because of the completion of the Periyar Project by which the water from the Periyar river is let into the Vaigai.

Tambraparni

17. This river rises in the southern ghats and gets the benefit of the south-west monsoon. It has a large flow and forms a delta at its mouth and from time immemorial it has never failed in its water supply and two good crops are raised in its most fertile valley. It rises from the southern slope of the peak, Agasthyamalai, in the Western Ghats. After traversing a few miles through the hill range, it descends to the plains in five beautiful falls at Papanasam, a sacred spot for Hindus. Another fall is found in the heart of the hills called Banathirtham, but this cannot be easily reached. The river runs in a south-easterly direction for 70 miles and drains 1,739 square miles. A number of tributaries rising in the ghats, join the river. It finally flows into the Gulf of Mannar. It is fed by both the south-west and the north-east monsoons. Its valley represents the wealthiest portion of Tirunelveli district and the lands in the region are some of the most valuable in the State. 94% of the irrigated area is double-cropped generally with two rice crops. Chief towns of the district like Ambasamudram, Kallidaikurichi, Tirunelveli and Palayamcottai are located on the banks of the river. Korkai, the first capital of the Pandyas is at the mouth of the Tambraparni. Chittar is a smaller stream which joins the Tambraparni river a few miles north-east of Tirunelveli. It drains the mountains of the western border of the Tenkasi taluk.

Vellar (White river)

18. It is formed by the junction of two streams called the Vasishtanadi and Swetanadi which rise in Salem district and receive the drainage of the Pachaimalai, Kollimalai and Kalrayan hills. The river forms a boundary for some distance between Tiruchirapalli and South Arcot districts. Flowing eastwards, it joins the sea at Porto Novo. The total length of the river is 134 miles and its catchment area 2,660 sq. miles. Rising on the eastern slope of the Kalrayan hills, Manimuktanadi forms the chief tributary of the Vellar. The river is affected by the tide for 7 to 8 miles from its mouth.

Smaller Rivers

19. Kortalaiyar flows from the surplus water of the great tank at Kaveripakkam in North Arcot district. Crossing Chingleput district from west to east, it flows into the backwaters at Ennore near the city of Madras.

Arani river enters Chingleput district in the north of Tiruvallur taluk. It joins the sea near Pulicat after running through Tiruvallur and Ponneri taluks of Chingleput district.

Cooum river formed by the surplus water of the Kuvam tank in Chingleput district, flows through Saidapet and Madras City and joins the sea at Fort St. George.

Bhavani river which rises in Atapadi valley in Malabar, crosses Coimbatore district from west to east and joins the Cauvery at Bhavani town.

Noyil river rising in the Balampatti valley near the Nilgiris, passes through Coimbatore City and joins the Cauvery.

Amaravathi river rises in the Anamalai hills and after collecting the drainage of the northern slopes of the Palni hills in Madurai district, it passes through Dharapuram and Karur towns and joins the Cauvery.

Gundar rises in the Varushanad and Andipatti hills and flows in Madurai district parallel to the Vaigai.

Varshalei river draining the eastern slope of the Nattam hills flows past Tirupattur and enters the sea between Uraiyur and Tondi through several branches.

The rivers Amaravathi, Shanmukhanadi and Nanganji and Kodavanar drain the northern slopes of the Palni hills.

The Pandi river in Nilgiri district runs eastwards and joins the Moyar which forms for many miles the boundary between Madras and Mysore States.

Moyar which rises from Mukurti peak is called Pykara for the first part of its course. It falls into the lower country by the two Pykara falls.

Cheyyar has its source in the Javadi hills. The river bed is dry for most part of the year. It flows southwards and then bends to the east and north east and passes through South Arcot and North Arcot districts and joins the Palar at Walajabad in Chingleput district.

Gingee river known as Varahanadi rises in Tindivanam taluk of South Arcot district and enters the sea near Pondicherry.

Gadilam river rises from Kallakurichi taluk of South Arcot district and is 59 miles long. Malattar, a natural channel connects it with Ponnaiyar and the river runs into the sea near Fort St. David, a mile north of Cuddalore.

Coleroon the southern-most river of South Arcot district separates the district from Thanjavur for 36 miles and falls into the sea 3 or 4 miles south of Porto Novo. It is a branch of the river Cauvery.

Vaippar in Tirunelveli district rises in the Sankaranayinarkoil hills and it is a stream of considerable size. The supply in the river is too sudden and occasional.

West flowing Rivers

20. Owing to the topography of the State, it is difficult to see any river flowing westward. Still a few important rivers are found in Coimbatore flowing towards Kerala State. This is due to the presence of the Palghat Gap on the western borders of the district. Palar and Aliyar are the two important rivers in Coimbatore district which flow westward.

The Palar rises in the Anaimalai ranges in Udumalpet taluk and flows in a north-westerly direction. It is strengthened by a smaller river, the Nallar, which also rises in the Anaimalai hills. The Palar continues its north-westerly course until it joins the Aliyar river a few miles west of Ambirampalayam in Pollachi taluk.

Aliyar is known as Torakadavu Aar during its early stages. It has its origin in the Anaimalai hills and it is strengthened by a number of small streams. Uppar joins it a few miles north of Vettaikaranpudur. Running in a northerly direction, it receives the river Palar and takes a north-westerly direction and finally leaves the district. Entering Kerala State, it flows as the Bharathapuzha river.

Another river Sholaiyar originating in Coimbatore district flows westward into Kerala. It rises in the Anaimalai hills in Pollachi taluk and flows in a south-westerly direction and enters Kerala State.

The Parambikulam-Chalakudi river has its origin in the Western Ghats near Ramalakshman Malai. It flows through Coimbatore district for 12 miles before entering Kerala State. The river which is known as Periyar in the district flows in a southerly direction and then flows westward and crosses the borders of the State.

Idumalai-aar formed by the river Kallar and some minor streams flows westward along the southern borders of the Coimbatore district.

Perennial and Non-Perennial Rivers

21. Most of the rivers in the State are non-perennial. Even in the perennial rivers, water-flow during the summer months measured. The important rivers can be classified as follows :-

Perennial	*Non-Perennial*
Palar	Vellar
Cheyyar	Noyil
Ponnaiyar	Suruliar
Coleroon	Gundar
Cauvery	Vaippar
Moyar	Valparai
Bhavani	Varshalei
Amaravathi	
Vaigai	
Chittar	
Tambraparni	

Compared to the rivers that originate in the Western Ghats and flow into the Madras State from other States, rivers that rise in Madras State and flow into other States are insignificant.

Rivers of Kanyakumari

22. The rivers in the Kanyakumari district which was ceded to Madras under the States

Reorganisation Act of 1956 are mostly non-perennial and short.

Paralayar or Kuzhithura rises on the mountains north of Mahendragiri hills in Thovala taluk. Running through a wild tract, the river enters the plains at Tiruvattar and flows in a south-westerly direction. After a course of 23 miles from its source, it is joined by Kothayar. Then flowing through Kalkulam and Vilavancode taluks the river joins the sea at Sengapatnam. The length of the river is 37 miles. It is also known as Thamaravarni.

Kothayar rises at an elevation of 4,500 feet in Kalkulam taluk, reaches Mottachi valley of 1,800 feet height after running 14 miles. It is joined by two streams on the Motavan Potha and the Thachamalai hills. Proceeding further south, the river receives Paralayar at a place above Kuzhithura. The river is 20 miles long.

The southern-most river in the State, Vatasseri or Pazhayar is a combination of several small streams. Flowing through Thovala and Agasteeswaram taluks in a south-easterly direction, it flows into the Manakudi estuary after a course of 23 miles. It is a useful river for navigation as well as irrigation.

Climate

23. The climate of Madras is essentially tropical. It is, however, more equable than the climate of North India, summers being less hot and winters less cold. The maximum temperature hardly exceeds 110° F (43° C) and the minimum seldom falls below 65° F (18° C). The climate of Madras State is determined by its configuration and situation as well as relief and proximity to the sea. It lies wholly within the tropics and for most part of the year is exposed to the full blast of the monsoon.

Winds

24. The winds of both the advancing and retreating monsoons– south-west and the north-east—remain save for local variations, the prevailing force in the region.

What are the elements determining the climate of Madras State? The movement of sun towards north and south which is cosmic and the monsoon which is planetary are common to all parts of the land. The variation in the climate can, therefore, be accounted for by the gradual and abrupt elevations of over 2,000 feet from the sea level and by the distance from the sea ranging from 0 to 250 miles. Due to the rise of land in the interior, the sea's influence on climate is felt only within a few miles of the coast thereby giving rise to variations between coastal and the interior type of climate. The variation is, however, not well marked since maximum distance from the sea always falls short of 250 miles. No large lakes and big forests are found in Madras State which can affect the climate. However, the vast area under cultivation can bring down to a considerable extent the temperature of any region. To give one example—Kumbakonam is comparatively cooler than the sea coastal town of Nagapattinam in Thanjavur delta. The location of the Eastern Ghats cutting across the State and the gap in the Western Ghats known as the Palghat gap have also affected the climatic conditions. Climatic differences can be noticed even in plains due to their relative aspect to mountain, plain, sea, wind and rain.

Temperature

25. The State comes under one of the hot regions of the world lying between 8° 4′ to 13° 15′ north. The sun passes vertically overhead at all places twice in the year. The length of the day is seldom below 11 hours. The cloudless skies prevailing during January and June result in high temperature. The fierce heat which is experienced just before noon in summer continues for a couple of hours more. From January, generally, the temperature rises through the months of February and March to a maximum in April, May and June. Till September, the temperature falls gradually. With the commencement of north-east monsoon in October, the temperature falls at a fairly rapid rate and the fall continues till December. The lowest temperatures are recorded during December and January. At Madras, the mean temperature is between 75° F to 88° F. The difference is less than 15°. The lowest mean monthly minimum temperature is recorded in January. In Coimbatore, the average maximum temperature is between 85° and 96° F and the average minimum temperature between 64° and 74°F. In the southern districts of Tiruchirapalli, Thanjavur, Ramanatha-

puram and Tirunelveli, the average maximum temperature ranges from 83° to 104° F and the average minimum temperature from 68° to 79°F. Nilgiri with an elevation of 3,000 to 8,000 feet, has a different climate. The average maximum temperature varies from 60°to 75° while the average minimum temperature is between 45° to 55° F. As a rule, the climate is cool. In Coimbatore district, the highest temperature recorded is 103° F or 39.44° C in May 1952. The lowest temperature recorded is 56.08° F or 15.6° C in December in the decade 1951-60. Spells of hotness are found in the State for days together even at places like Madras on the sea coast with mercury rising to over 100° F. During such spells heat waves are not uncommon, but they are not as oppressive as in some of the northern parts of India. The temperature in Tiruchirapalli during the hot weather is high, probably because of the sun glare and the reflected heat of the rock fort. During the hot season in particular the atmosphere is remarkably dry. The south-east wind that flows occasionally renders the evenings comparatively cool. Due to the high elevation of the Nilgiri and excessive moisture content in the atmosphere, the temperature in the region is low. Further, the higher and western portions of the district come under the influence of south-west monsoon. The mean maximum temperatures of some stations in Madras State during 1960 are given below :—

TABLE II--3

Mean maximum and mean minimum temperatures of select stations, 1960

(in Centigrade)

Station (1)	Jan. (2)	Feb. (3)	Mar. (4)	Apr. (5)	May. (6)	June. (7)	July. (8)	Aug. (9)	Sept. (10)	Oct. (11)	Nov. (12)	Dec. (13)
Madras Nungambakkam												
Mean maximum	28.2	29.7	31.5	33.7	36.2	37.3	34.5	36.3	32.6	32.2	27.6	28.2
Mean minimum	21.0	20.4	22.8	25.6	27.3	26.9	25.5	26.2	24.0	24.2	22.2	21.0
Tiruchirapalli												
Mean maximum	31.0	32.5	34.9	36.1	36.2	37.4	33.7	35.8	34.3	33.5	27.9	30.1
Mean minimum	21.4	21.0	23.4	25.7	26.0	27.0	25.1	25.9	25.0	24.3	22.4	21.5
Vellore												
Mean maximum	29.7	32.3	34.8	37.4	38.3	36.6	33.9	35.2	32.6	32.7	27.2	28.7
Mean minimum	18.1	17.4	21.4	24.3	26.1	25.5	23.9	24.7	23.3	22.4	20.8	18.7
Palayamcottai												
Mean maximum	31.9	32.1	34.9	34.2	33.7	35.7	34.3	35.2	34.5	34.4	29.6	30.5
Mean minimum	22.5	22.4	23.9	24.6	25.6	...	...	25.9	25.5	24.6	22.9	22.5
Tuticorin												
Mean maximum	27.8	27.6	30.0	31.5	33.5	35.9	32.9	34.6	34.1	31.7	28.6	28.4
Mean minimum	22.8	22.5	26.3	27.4	26.9	27.4	25.6	26.1	26.1	24.4	23.1	22.6
Meenambakkam												
Mean maximum	28.3	30.3	32.6	35.6	37.5	37.3	34.8	36.3	33.1	32.4	27.5	28.3
Mean minimum	20.6	20.5	23.2	25.9	27.7	27.2	25.9	26.5	24.6	24.5	22.5	21.4
Pamban												
Mean maximum	28.9	28.9	31.1	32.0	31.7	32.0	31.7	31.8	31.2	30.6	28.7	29.1
Mean minimum	24.4	24.4	24.5	26.4	27.1	27.6	26.3	...	26.0	24.9	24.1	24.2
Salem												
Mean maximum	31.7	33.8	36.5	37.0	34.9	34.4	31.9	33.0	31.5	...	28.3	31.0
Mean minimum	19.9	20.0	23.0	25.1	25.2	24.9	23.7	23.9	23.4	23.0	21.5	19.6

TABLE II—3 (Concld.)

Mean maximum and mean minimum temperatures of select stations, 1960

(in Centigrade)

Station	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Nagapattinam												
Mean maximum	27.8	28.6	32.3	33.3	35.0	37.3	33.5	35.6	33.6	31.8	27.5	28.4
Mean minimum	22.5	23.0	24.8	26.5	26.8	26.8	25.7	26.4	25.5	24.9	23.2	22.2
Cuddalore												
Mean maximum	27.9	28.9	31.3	33.1	35.8	37.3	34.2	36.2	33.4	31.8	27.3	28.3
Mean minimum	20.6	20.0	22.2	24.9	26.5	26.2	24.9	25.2	23.8	23.4	21.9	21.6
Kallakurichi												
Mean maximum	30.0	32.3	35.5	37.3	37.8	37.8	34.3	36.0	33.5	33.0	27.3	29.0
Mean minimum	21.0	...	...	...	26.1	26.8	24.6	25.1	24.3	23.6	22.0	20.7
Madurai												
Mean maximum	31.5	32.1	35.0	34.9	35.2	37.4	34.2	36.0	34.8	33.6	29.3	30.8
Mean minimum	21.5	21.5	23.8	25.2	25.5	26.1	24.7	25.0	24.8	24.0	22.7	22.1
Kodaikanal												
Mean maximum	17.5	17.7	19.5	19.4	18.8	19.4	17.3	18.5	17.8	17.5	14.9	17.8
Mean minimum	8.3	8.4	9.8	10.9	12.3	12.1	11.6	11.4	11.7	10.6	10.1	9.4

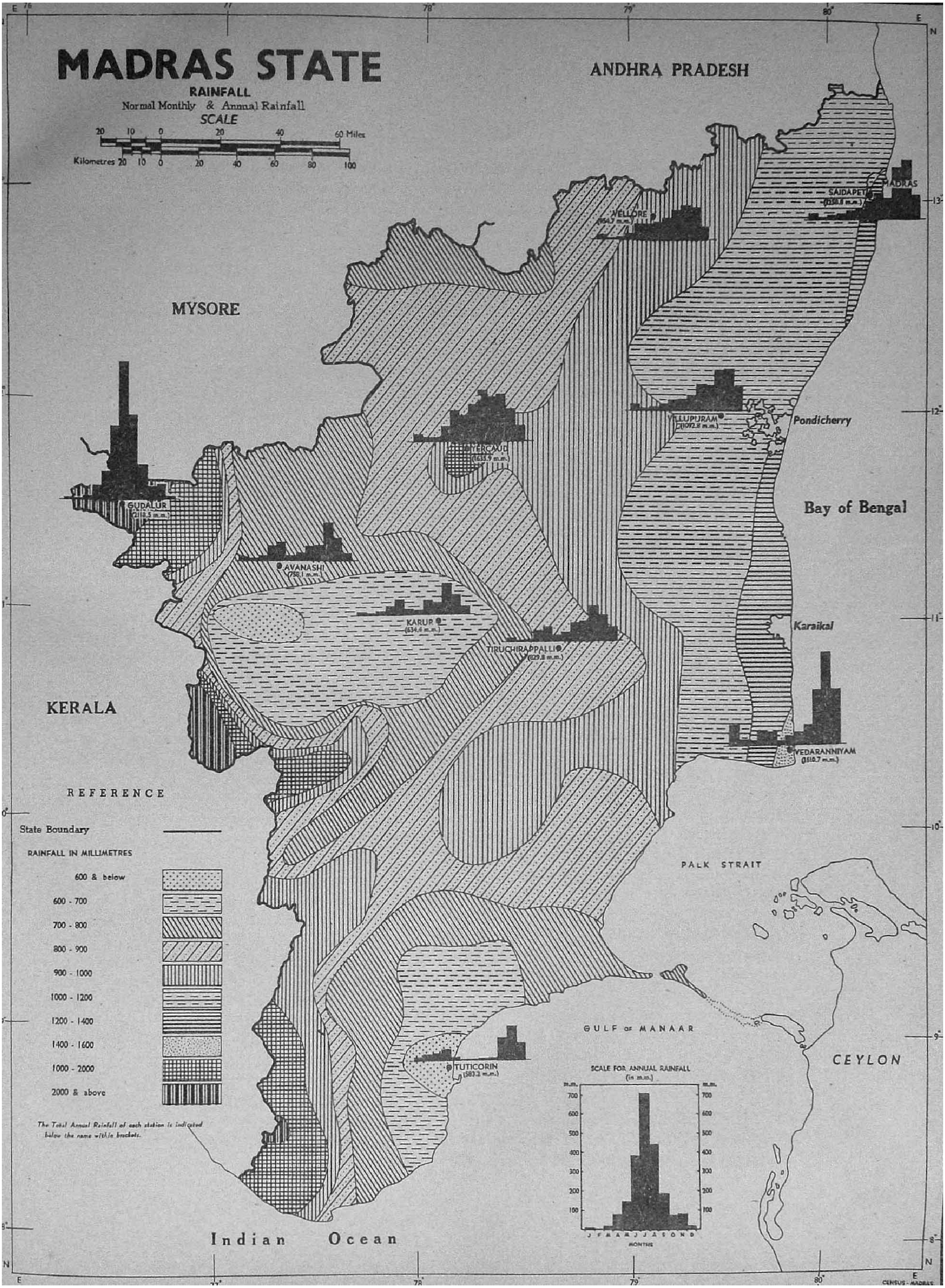
On the coast, the highest mean monthly maximum temperature is less than 99° F, but the minimum is more than 80°. In the northern part of the coast, the highest mean daily maximum temperature is reached towards the end of May and in the beginning of June, while in the southern part of the coast (Pamban) it is reached towards the end of April and the beginning of May. The highest maximum temperatures occcur earlier in the interior than on the coast. In the beginning of the hot season, a strong indraught from the sea moves towards the hot interior and these southerly winds bring down sensibly the day temperature though the effect decreases with the distance from the coast. During May the westerlies blow down to the coast and overpower the south-easterly indraught and lessen its cooling effect. These winds are descending winds from the plateau in the west to the sea level and are therefore subject to compression which increases their temperature. Moreover, these winds by the time they reach the coast will have blown over a vast stretch of heated land and their temperature is cumulative. The cloudless skies which prevail from January to June result in high temperatures and the east coast has, therefore, a bigger annual range than the west coast, but less than the plateau. Thus, it can be concluded that the climate is really tropical and there is no place in the State which suffers from the extremities of climate.

Due to the influence of the south-west monsoon the winds blowing in the State are strongly monsoonic and therefore periodical and regular. Blowing with constancy of velocity and direction, they determine the climate of the localities. The south-west monsoon in 1961 started early and was unprecedented in its intensity and incidence. Winds during the season blow with gusto and with a good velocity. Some of the coastal districts of the State have suffered occasionally by winds during the formation of cyclones and many trees and posts have been uprooted. The districts of Thanjavur, South Arcot and Tiruchirapalli have experienced strong winds during several monsoons. The winds are charged with moisture or dry, heated or cooled at places in their track. The storms and cyclones occuring in the Bay of Bengal during the monsoons move deep into the interior of the State. Along the coast, the phenomena of land breeze and sea breeze are observed, but very often they are controlled by the force of monsoons. In the winter months—November to February—they are weak,

increase rather rapidly during March and April and are strongest during the summer months of May to September when the differential heating between land and sea is at the maximum. It can be said that the wind has a greater velocity during the months of May—June—July and again in December. The north-east monsoon does not reach the interior of the State since they are considerably weakened after crossing the vast stretch of lands near the coast. This may perhaps be the reason for the high hot weather average temperature in Tiruchirapalli and Coimbatore districts. They, of course, experience the blow of winds of the south-west monsoon which comes through the Palghat gap The summer winds of the region are also of good velocity and there is an apt Tamil proverb to the effect that during the winds of Adi month, even the grinding stone will fly. (ஆடிக்காற்றில் அம்மியும் பறக்கும்) We can refer to the views of Mr. Frederic Nicholson on the influence of the Palghat gap over the wind and temperature. "In the months of June, July and August, the effects of Palghat gap are conspicuous through the funnel shaped opening some 16 miles broad, the cool south-west wind rushes with great violence, its course being visible from Coimbatore by a column of clouds and vapour. The cooling effect for many miles is very great, but it has its drawbacks; its violence is such as to overturn laden carts and entirely to prevent the pitching of tents in the tracts opposite to the gap; another drawback is in its tendency, especially in the evening to cause sudden and dangerous chills if the body is incautiously exposed without woollen protection. Its violence and cooling effect are largely spent towards the east (in Coimbatore district) where it is fitful, hot and dusty, so that June and July at Erode and Karur are not pleasant months." The wind of the south-west monsoon blows very strongly across the Cauvery delta to the east coast.

Rainfall

26. The rainfall in the region is determined by the south-west monsoon (June to September) and the north-east monsoon (October to December). The districts of Chingleput, South Arcot, Thanjavur, Madurai, Ramanathapuram and Tirunelveli depend mainly on the north-east monsoon. The normal rainfall is 40 to 45 inches in South Arcot and Thanjavur districts and 30 to 35 inches in others. The districts of North Arcot, Salem, Coimbatore and Tiruchirapalli in the central region depend on both the monsoons and the normal rainfall in North Arcot and Tiruchirapalli districts is between 35 to 40 inches and between 30 and 35 inches in other districts. The Nilgiri in the western portion of the State depends on south-west monsoon with a normal rainfall of 60 to 70 inches. During the south-west monsoon, the State lies in the lee of the Cardamom hills and the plateau, so that during India's normal rainy season from May to September, no part of Madras State receives more than 20 inches of rain. In October during the change of the monsoons severe storms occur along the Madras coast and rain falls with the result that October is a wet month over much of the region. In November and December similar storms bring rain and the coastal plain is wetter than the hilly regions in the west. The two parts differ somewhat climatically. The average rainfall in the State varies in different areas over a wide range of 25 to 75 inches per year. The Nilgiri and other mountainous regions account for the maximum rain, most of it due to the south-west monsoon. Kanyakumari district gets relatively high rainfall on account of precipitation during the two monsoon seasons as well as in summer. Of the remaining area, Coromandel coast has the highest precipitation, 40 to 50 inches. Rainfall decreases westward in the plateau and southward along the coastal plain, Coimbatore and the southern districts, Ramanathapuram and Tirunelveli having the lowest rainfall. In large parts of the State, the average rainfall is low. The normal precipitation ranges between 20 to 40 inches per year in approximately 75% of the State thus resulting in semi-arid conditions. The total rainfall in the districts of North Arcot, South Arcot, Chingleput and Thanjavur is higher than the remaining districts except Nilgiri and Kanyakumari. Nilgiri and Kanyakumari districts have a much higher rainfall and a much better distribution than other districts of the State. Based on the rainfall records from 1901 to 1950, it is seen that Kanyakumari district has an average annual rainfall of 1,469.7 millimetres. The average annual rainfall of the Madras Division is 1,008.1 millimetres with an average annual number of rainy days of 53.5. The year can


MADRAS STATE
RAINFALL
Normal Monthly & Annual Rainfall
SCALE
20 10 0 20 40 60 Miles
Kilometres 20 10 0 20 40 60 80 100
ANDHRA PRADESH
MYSORE
KERALA
Bay of Bengal
MADRAS
SAIDAPET
VELLORE
YERCAUD
(1635.9 m.m.)
VILLUPURAM
(1092.8 m.m.)
Pondicherry
GUDALUR
(2118.5 m.m.)
AVANASHI
(758.1 m.m.)
KARUR
(634.4 m.m.)
TIRUCHIRAPPALLI
(829.8 m.m.)
Karaikal
VEDARANNIYAM
TUTICORIN
(583.2 m.m.)
PALK STRAIT
GULF OF MANAAR
CEYLON
Indian Ocean
REFERENCE
State Boundary
RAINFALL IN MILLIMETRES
600 & below
600 - 700
700 - 800
800 - 900
900 - 1000
1000 - 1200
1200 - 1400
1400 - 1600
1000 - 2000
2000 & above
The Total Annual Rainfall of each station is indicated below the name within brackets.
SCALE FOR ANNUAL RAINFALL
(in m.m.)
m.m.
700
600
500
400
300
200
100
J F M A M J J A S O N D
MONTHS
76° 77° 78° 79° 80°
13° 12° 11° 10° 9° 8°
CENSUS - MADRAS

be divided into the following rain periods:

1. The hot dry period — mid-February to the end of March
2. Period of hot weather showers — Beginning of April to mid-June
3. Transition to the south-west monsoon rains — Second half of June
4. Period of south-west monsoon rains — Beginning of July to mid-October
5. Rainy period of the retreating monsoon — mid-October to mid-December
6. Cold transition period between the rainy period and the dry period — mid-December to mid-January
7. Cold dry period — mid-January to mid-February

These periods naturally group themselves into the following four seasons :—

1. Hot weather season — from mid-February to mid-June ;
2. South-west monsoon season—From mid-June to mid-October
3. Retreating monsoon season — From mid-October to mid-December
4. Cold weather — From mid-December to mid-February

During the hot weather and cold weather, if rains are reasonably good, dry lands are prepared for cultivation. The south-west monsoon is of particular importance to the State. It regulates the sowings. The rivers of the State depend on the rains of south-west monsoon for their supply of water and the rain falling outside the boundaries of the State is of great economic importance to the State. The heaviest rainfall of the season is experienced in the hilly region of Javadis and Shevaroys which lie in the track of the south-west winds from the Palghat gap. The rivers Cauvery and Tambraparni rise in places where the south-west monsoon falls. The quantum of rain during south-west monsoon, however, varies from year to year and also from district to district. In 1960, the rainfall was below normal in Salem, Coimbatore, Thanjavur, Tirunelveli, Nilgiri and Kanyakumari and above normal in other districts of the State. The rains during the retreating monsoon (the north-east monsoon season) supply water to the rainfed tanks. During the north-east monsoon period October to December 1960, the rainfall was above normal in all the districts of the State except Salem, Coimbatore, Tiruchirapalli, Tirunelveli, Nilgiri and Kanyakumari. During this season cyclones are formed in the Bay. It can, therefore, be said that rainfall of this season is closely associated with the seasonal depression in the Bay of Bengal. When the depressions in the Bay develop into cyclones they move into the land carrying with it heavy rain. The north-east monsoon rains are the heaviest in the northern part of the coast and decreases gradually towards the interior. The rains occurring during the dry seasons are normally scanty and unreliable. The dry season commences from the beginning or the middle of December and lasts till the middle of April. The showers during the hot weather in March, April and May though small are useful in the mitigation of the heat and help the agriculturists.

Rainfall Regions

27. The high rainfall regions are the Nilgiri, coastal regions of South Arcot and Thanjavur districts, Palni hills of Madurai district, sub-coastal and coastal regions of Chingleput, South Arcot and Thanjavur districts. The medium rainfall region comprise the western part of Chingleput and South Arcot districts, North Arcot district, eastern part of Salem district, western part of Thanjavur district, eastern and northern portion of Tiruchirapalli district, eastern part of Madurai district, northern part of Ramanathapuram district, northern parts of Coimbatore and Salem districts. The low rainfall region consists of central and southern part of Ramanathapuram district, Tirunelveli district and parts of Coimbatore, Madurai and Tiruchirapalli districts. The central part of Coimbatore constitutes very low rainfall region. Based on records from 1901 to 1950, the average rainfall

and the number of rainy days in the various districts of Madras State are given below:—

TABLE II—4

Average annual rainfall and number of annual average rainy days (1901 – 50)

District	Average annual rainfall in mm.	Number of annual average rainy days
1	2	3
Madras	1,008.1	53.5
Chingleput	1,211.0	54.9
North Arcot	971.1	53.0
South Arcot	1,188.9	54.4
Thanjavur	1,147.8	52.8
Tiruchirapalli	877.1	47.4
Madurai	854.8	50.8
Ramanathapuram	839 5	45.8
Tirunelveli	814.8	46.2
Salem	843.1	51.0
Coimbatore	1,030.4	52.8
Nilgiri	1,920.9	106.2
Kanyakumari	1,469.7	85.9

A rainy day is a day on which 2.5 millimetres or more of rain is recorded. An idea of the rainfall in the districts of the State can be had from the above statement. It cannot give a realistic picture since the annual average of each district has been calculated from the recordings of a few stations in the district. The average in the Nilgiri district where the rain gauge stations are at 3,500 feet and above cannot be relied on due to the great variability of rainfall from station to station. The actual annual rainfall in the Madras division since 1951 are as follows:—

Year	Annual rainfall (m.m.)
1951	806.5
1952	682.8
1953	891.8
1954	988.8
1955	1,032.8
1956	973.1
1957	883.8
1958	825.5
1959	970.2
1960	1,097.7

The following statement gives rainfall figures during 1960 in a few important centres in Madras State:

TABLE II—5

Annual rainfall in raingauge stations, 1960

Station	Annual rainfall in 1960 (in inches)
1	2
Nungambakkam (Madras)	66.70
Tiruchirapalli	27.92
Tirumayam	23.21
Lalgudi	15.92
Alangudi	18.01
Karur	10.78
Polur	51.08
Tiruppattur	41.36
Tiruvannamalai	42.63
Arkonam	51.65
Vellore	47.04
Kalial	82.53
Colachel	54.70
Kuzhithurai	67.84
Eranial	54.61
Thamaraikulam	34.60
Tuticorin	35.87
Sattankulam	26.72
Sankaranayinarkoil	25.62
Shencottah	39.54
Palayamcottai	39.45
Meenambakkam	65.83
Chingleput	59.88
Tiruvallur	51.42
Poonamallee	55.63
Sriperumbudur	62.90
Ramanathapuram	36.67
Sivaganga	48.64
Srivilliputtur	39.71
Mudukulathur	45.44
Pamban	41.67
Yercaud	66.66
Namakkal	27.26
Krishnagiri	35.72
Hosur	24.86
Salem	36.81
Thanjavur	37.92
Kumbakonam	37.49
Mannargudi	42.50

Station	Annual rainfall in 1960 (in inches)
(1)	(2)
Nagapattinam	96.03
Pattukkottai	45.37
Tindivanam	45.85
Chidambaram	60.34
Vriddhachalam	54.77
Cuddalore	64.85
Kallakurichi	35.08
Madurai	36.81
Kodaikanal	73.38
Uthamapalayam	34.83
Dindigul	31.29
Nilakkottai	29.84

Variability of Rainfall

28. The variability of the annual rainfall is high in this State. In the arid parts of Coimbatore and Tirunelveli and in the east coast region the variability is significantly high. Inspite of the fact that high rainfall records have been made in the east coast, the co-efficient of variability is also high in this region. This may perhaps be because of the none-too-infrequent weather disturbances caused by the depressions in the Bay of Bengal. The arid interior and south-east coasts are, contrary to the east coast, liable to frequent departures from the mean annual rainfall. In the central and southern parts of the State also, frequent departures are recorded from the mean annual rainfall. In the north-east, central and southern regions, a large area records a high co-efficient of variability. The north-western part and sub-montane regions in the south record a moderate variability index in spite of their low rainfall. Due to the south-west monsoon winds blowing through the Palghat gap, the variability is moderate in the northern region. The sub-montane regions have a low variability index owing to the foot of the ghats which act as the medium of precipitation. In the hilly areas and the south-western extremity of the State, the co-efficient of variability is low. While the reliable rainfall in the hilly areas is obvious, its reliability in the south-western region is due to its location and its exposure to both the advancing and retreating monsoons. The State can be divided into 7 agroclimatic regions, each with its agricultural individuality coincided with rainfall and irrigation. The east coast region consists of the districts of Chingleput, North Arcot, South Arcot and Thanjavur. It has an annual normal rainfall of over 1,000 millimetres. Rainfall during south-west monsoon is low and during north-east monsoon high (above 900 millimetres). In this region 62% of the net area is irrigated. The irrigation is through canals in Thanjavur and through tanks in other districts. Paddy is the main crop with oilseeds and millets as subsidiary. The northern region (Salem district) has an annual rainfall between 800-900 millimetres. The rainfall during south-west monsoon is medium and north-east monsoon low. The percentage of net area irrigated is 17.3. Well irrigation accounts for more than 62% of the total irrigation; while the predominant crop is millet, the subsidiary crops are oilseeds and pulses. The north-western region (Coimbatore district) has an annual rainfall ranging between 600-800 millimetres. Rainfall is less than 400 millimetres during the south-west and north-east monsoons. The percentage of net area irrigated is 36.6%. Well irrigation accounts for more than 54.9% of the total area. The major crop is millet and subsidiary crops-oilseeds, cotton and pulses. The west-central region consists of the districts of Tiruchirapalli and Madurai with an annual rainfall of 700-900 millimetres. Rainfall is moderately low during both the monsoons. 31% of the net area is irrigated. Well irrigation accounts for 24% in Tiruchirapalli and 36% in Madurai. The staple crop in the region is millet and subsidiary crops, paddy pulses and cotton. The south-eastern region consists of the districts of Ramanathapuram and Tirunelveli with an annual rainfall of 900 millimetres. The south-west monsoon rains are low while the rains of north-east monsoon are medium. 38.1% of the net area is irrigated. Well irrigation accounts for 13% of the total irrigated area. Rice and millet are the major crops. Cotton, oilseeds and pulses are subsidiary crops. The south-western region (Kanyakumari district) has an annual rainfall of about 1,000 millimetres. The percentage of net area irrigated is 34.5%. Paddy is the predominant crop; fruits, vegetables and cocoanuts are subsidiary crops. Tank irrigation is of great importance. The western hill region (Nilgiri district and the Palni taluk of Madurai

district) has an annual rainfall of over 1,000 millimetres. Only 1.5% of the net area sown is irrigated. Tea and coffee are the predominant crops and millets and paddy, subsidiary crops. The skies are more or less cloudless during January to June. Cloudiness is the greatest during the advancing south-west monsoon season. Clouds are the maximum during July and minimum during March. In certain areas like Nagapattinam and Pamban cloudiness reaches maximum in November and continues in December. In spite of the fact that these two towns are away from the influence of the south-west monsoon through the Palghat gap, they are under the full sway of the north-east monsoon. Due to the influence of both the approaching and retreating monsoons Madras, Cuddalore, Coimbatore, Madurai and Palayamcottai have two periods of maximum cloudiness. On the other hand, there is a single maximum period of cloudiness as observed in July in the interior towns of Vellore, Tiruchirapalli, Pudukottai and Salem.

SOILS

Main types

29. Three main types of soils found are red, black and alluvial. The predominant type, however, is red. Along the coastline, some patches of arenaceous soils are also found. Black cotton soil or regur is found concentrated in parts of Salem, Coimbatore, Ramanathapuram, Tiruchirapalli and Tirunelveli, the alluvial soil in the river deltas and the laterite soil in the temperate plateau and parts of the east coast. The most fertile soil may be deltaic which is found concentrated in the Cauvery Delta in Thanjavur district. And the alluvial soils are concentrated in the districts of Thanjavur and Tiruchirapalli. The soils of the State are mostly infertile, shallow and gravelly in the uplands but get darker and heavier and fertile in the low lying lands.

Three main types of red soil are found, clayey, loamy and sandy. The black loam which is considered the best bears the highest rate of wet assessment. It keeps moisture for sometime and helps the crops to tide over partial failure of rain. In fertility, next is black clay which yields good crops like paddy, millets, pulses, sugarcane and gingelly under irrigated and rainfed conditions. Black and red sands are inferior soils useful for the cultivation of groundnut and pulses. Red sandy soil is found in treeless and arid areas. Coastal arenaceous soils are useful for cultivation of cocoanut, palmyrahs, cashew and casuarina. The black and red soils are distributed throughout the State.

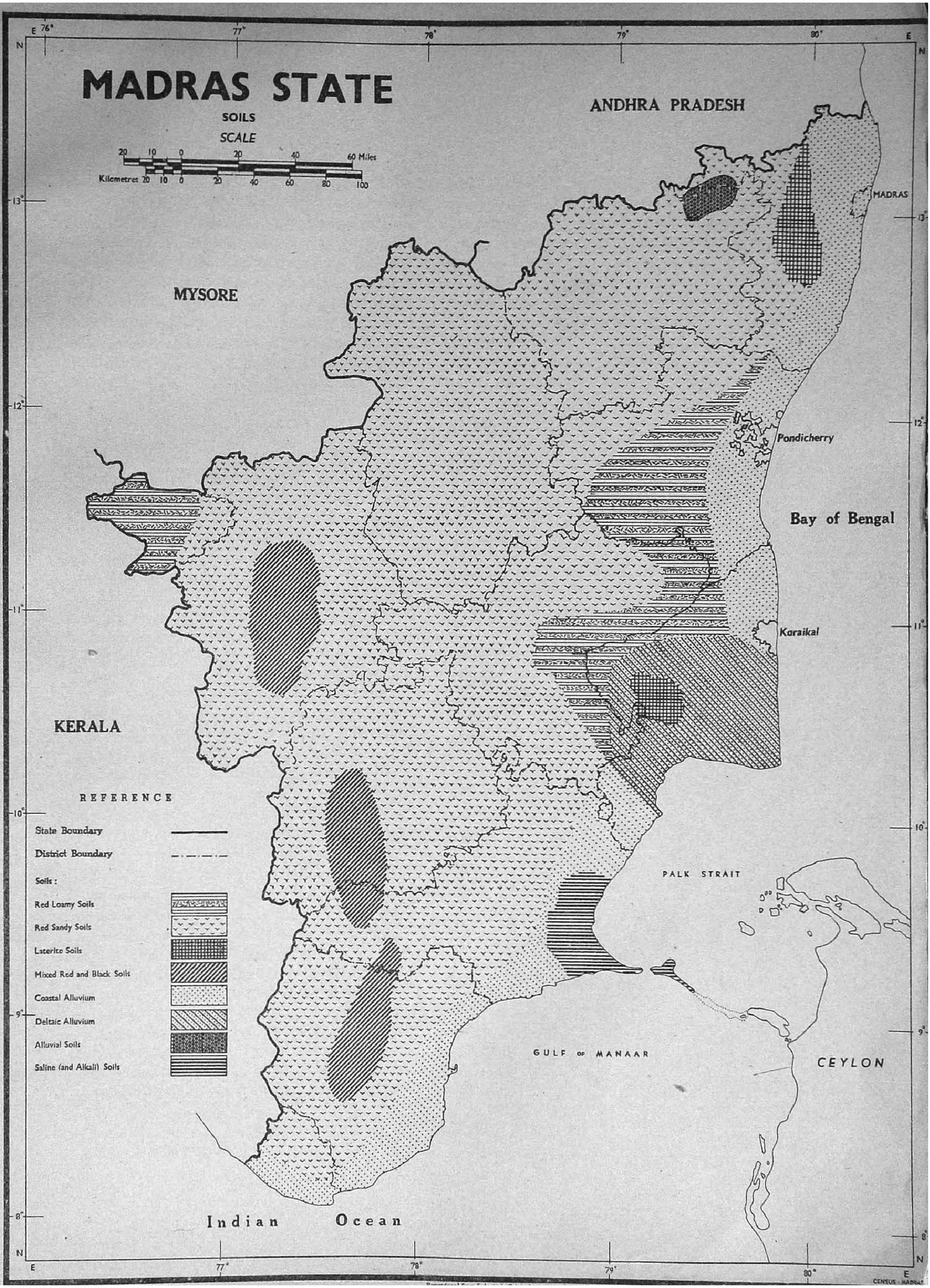
The deltaic alluvial soil is self sufficient with lime, potash and magnesium. But its nitrogen content is low. Its main deficiency is phosphoric acid, its main limiting factor is water.

Red soil

30. Red soils can be found in all the districts, the largest concentration being in Madurai and North Arcot. Over 60% of the cultivated area in Chingleput, South Arcot, Salem, Coimbatore, Tirunelveli and Tiruchirapalli have red soils. It is also found in small areas in Thanjavur and Ramanathapuram districts. This soil is poor in nitrogen, organic matter and phosphoric acids and is less fertile than black soil. Nevertheless, larger varieties can be cultivated on this soil because of its loamy structure. The intermixture of fine and thick particles also makes it suitable for cultivation of larger variety of crops than the black soil. The red soils are sandy in North Arcot district, loamy in South Arcot district and clayey in Coimbatore district. The clayey red soil is the most fertile of the three soils. Soils are categorised as dry and wet. Dry soil is non-irrigated and the wet soil is irrigated otherwise than from private wells. In general dry soils are deficient in organic matter, its phosphoric acid is low, nitrogen is wanting and nitrifying power small. Alumina is lacking in the vast areas of sandy soils, potash and iron are usually sufficient, but lime is low in the red soils, humus is in defect everywhere. Wet soils which are better are formed chiefly of the mixed alluvium washed from the hills and uplands and are fairly manured.

Black soil

31. Black soils are found scattered in a


MADRAS STATE
SOILS
SCALE
20 10 0 20 40 60 Miles
Kilometres 20 10 0 20 40 60 80 100
ANDHRA PRADESH
MYSORE
KERALA
MADRAS
Pondicherry
Bay of Bengal
Karaikal
PALK STRAIT
GULF OF MANAAR
CEYLON
Indian Ocean
REFERENCE
State Boundary
District Boundary
Soils :
Red Loamy Soils
Red Sandy Soils
Laterite Soils
Mixed Red and Black Soils
Coastal Alluvium
Deltaic Alluvium
Alluvial Soils
Saline (and Alkali) Soils
76°
77°
78°
79°
80°
13°
12°
11°
10°
9°
8°
N
E
CENSUS - MADRAS

number of areas unlike the black cotton soils of the Deccan which are found in a contiguous mass. Though more friable, they are less retentive of moisture and more suited to irrigation. Black soil is more fertile than the red soil and the red soil is more fertile than the arenaceous. However, this broad classification is not the only real of test fertility of any particular field. The laterite soils in Madurai and the Nilgiri districts are highly acidic in nature, deficient in lime, nitrogen and magnesia.

Distribution of soils

32. The following table shows the percentage distribution of soils according to the Settlement Records (excluding the Nilgiri and Kanyakumari) where soil classification has not been done.

TABLE II-6

Percentage distribution of soils

District	Black soil	Red soil	Arenaceous soil	Alluvial soil
1	2	3	4	5
Chingleput	29	65	6	...
South Arcot	35	62	3	...
North Arcot	16	84	...	...
Salem	40	60	...	...
Coimbatore	24	76	...	...
Tiruchirapalli	34	60	...	6
Thanjavur	48	21	7	24
Madurai	14	86	...	...
Ramanathapuram	73	27	...	...
Tirunelveli	40	60	...	...

Thanjavur district and the Periyar irrigated area have been covered by a soil survey based on chemical analysis. The result shows that except in some places along the Coleroon river and in Papanasam, Mayuram and Tiruthuraipundi taluks of Thanjavur district and nearly a fourth of the Periyar irrigated area, the phosphates are found to be generally deficient while nitrogen is deficient throughout.

On the whole, the State contains fairly fertile alluvial soils transported from the hills and uplands. The soils over vast areas of the rest of the State are shallow or gravelly overlying a sterile and sometimes impenetrable subsoil of gravel and rock. Cultivated soils are deficient generally in nitrogen and organic matter. In many places, phosphoric acid is low, but potash is generally sufficient and lime is low in the red and laterite soils. The reaction of the soil varies from highly acidic in the temperate regions and some of the plains portion of the Tambraparni basin to neutral and slightly alkaline in most of the plains area.

Soils in the districts

33. A brief description of the soil of the districts is given below :

Chingleput : Black soils predominate in the southern taluks while the red soils predominate in the northern taluks. The red soils are mostly sandy loams. The soils near about the coast are rich in common salt (sodium chloride). The other soils, though containing a high percentage of clay and soluble salts are unsuitable for bunding.

South Arcot : Roughly 60% of the area consists of red ferruginous type of soil, the rest made up of black and arenaceous soils. The soil depth varies from 6 to 24 inches. They are inclined to be alkaline. Soluble salts are present in moderate form with a trace of calcium oxide and magnesium oxide. The soils contain a fair amount of total lime. They are poor in organic matter, nitrogen, phosphoric acid and potash.

Thanjavur : Black, red and alluvial soils are found in this district. Though rich in potash, the soils are generally deficient in nitrogen and phosphoric acid.

Madurai : The red soil from Kodaikanal is a sandy loam. The total phosphoric acid is low. The soils under plantations contain 15 to 18% of organic matter. The clay content is below 7% and most of the soils are sandy loam in character. Though well supplied in potash, the total and available phosphoric acid are deficient. The soils are laterite with sesquioxide ranging from 20 to 30%.

Ramanathapuram : The two black soils from Devakottai are loamy. The soils contain plenty of total sodium oxide. They are poor in nitrogen. Potash is moderate and less of available phosphoric acid is found.

Tirunelveli : Red and black cotton soils are available. In the black cotton soil of Kovilpatti, nitrogen is highly deficient and to a less extent

phosphoric acid. The lime content is between 2 to 3%. In the red soils, there is a general deficiency of all essential plant nutrients and lime. The black soils are generally heavy.

North Arcot: Soils are generally of the red ferruginous, loamy and sandy variety. Black soils are confined chiefly to the neighbourhood of principal rivers. A sample was rich in lime and potash and poor in nitrogen and phosphoric acid.

Salem: Samples from Hosur farm reveal the loamy nature of the soil with rich nitrogen content. The total lime and phosphoric acid content are low. The two red soils are clay and loams and are fairly supplied with all plant nutrient elements.

Nilgiri: The chief crops of the district are coffee, tea and other plantation crops. The soils vary in texture from clay loams to sandy loams and the moisture content ranges between 3 and 7%. The acid solubles are usually very low varying from 0.6 to 3%. Soils containing 20% of organic matter are considered to be rich, those containing 15% good and those with a content of 10 to 15% are fair. The soils are fairly rich in total and available potash but the phosphoric acid both total and available is extremely deficient. Being laterite soils, they contain about 20 to 35% of sesquioxide.

Coimbatore: Red, black and mixed type are found to be predominant in this district. Black soils from Coimbatore and round about show a clay content between 12 and 36%. The soils are well supplied in lime and contain a low amount of available phosphoric acid. The nitrogen content is fair. The red soils are ferruginous and contain a fair amount of lime, moderate quantity of nitrogen and are fairly well supplied in available nutrients.

Tiruchirapalli: Regur and red soils are found in the district. The alluvial soil is confined to the lands on either side of the river Cauvery. Most of the soils are clay loams, well supplied with lime and magnesium oxide.

Kanyakumari: Soil of the elevated land in the district is on a bed of laterite. Soil of the lower parts of the valleys consists of brownish coloured clay of some depth. At some places, the soil is a loamy mixture washed from the neighbouring uplands, porous, permeable and readily yielding to the plough. The coastal soil is fine sand with a mixture of calcarious clay. The soil is mostly loamy except on the coast, where it is sandy. Over two-thirds of the area of the district is covered by red sandy soil. Upto about 10 miles interior from the coast the soil is saline coastal alluvium.

FORESTS

Small forest resources

34. Forests occupy 13.3% of the area of Madras State as compared with about 22% of all-India. A good part of this consists of open low thorny shrubs or bare land yielding only fuel. The rest of the area is already being exploited to the maximum extent. The forest resources are small, compared with many other States. There is 0.16 acre of forest per capita as against 0.35 acre in all-India. The total forest area in the State is 21,378 square kilometres out of which reserved forests amount to 17,410 square kilometres and protected forests 3,968 square kilometres. The forests are mostly of the mixed type and of low timber value. 30% is covered with tropical moist and dry deciduous forests and a fifth of that is in tropical evergreen. Dry tropical thorn forests occupy the remaining area. Sixty percent of the tropical evergreen species and 30% of the tropical deciduous forests have no commercial value except as firewood.

Distribution of forests

35. The forest area is not distributed evenly among the different districts of the State. A greater concentration of forests is found in the hilly regions of the western districts and in the Javadi group of hills in North Arcot and Salem. While these districts have 20% of the total area under forests, Nilgiri has 58%, Thanjavur 1% and the

remaining districts 5% on the average. Madras State is far below the standard in forest area. According to the National Forestry Resolution of 1952, the optimum area under forests is to be about one-third of the total geographical area. Besides Nilgiri area, the other hill areas with predominance of forests are the Javadi hills in North Arcot district, Shevaroy and Kollimalai hills in Salem district, Anaimalai hills in Coimbatore district, Palni and Andipatti hills in Madurai district and Varushanad hills in Ramanathapuram district and Western Ghats foothills in Kanyakumari and Tirunelveli districts. Next to Nilgiri district, Kanyakumari has the highest percentage of forest area, viz. 29.8%.

Forest species

36. Bamboo and Eta reed are the two species in the forest inventory of Madras State which are of economic importance. While the bamboo grows in the tropical deciduous forests on hilly slopes, eta reed occurs in the moist and hilly regions of Shencottah, close to Kerala State border. The latter is found in good concentration in the Papanasam reserved forests also. Bamboos are useful for construction and eta reed for making paper pulp.

Madras State is one of the largest producers of sandalwood in India. Roughly 30,000 tons of timber are extracted from reserved forests every year. In order to augment fuel supplies, casuarina, eucalyptus and other plantations are raised in forests. The forests are classified as timber forests, fuel forests and sandalwood forests. The economic plantations in the forests include teak, softwoods, casuarina, wattle and bamboos, Minor produce includes bamboos, fodder grass, surul bark, tamarind, soapnut, gallnut, green manure leaves and seeds, palmyrah leaves, cashew, honey, white clay, stone and so on.

Extent and output

37. An idea of the forests of Madras State can be had from the information given below :

1.	Area of reserved forests ...	17,238 sq.km. or 6,655 sq.miles
2.	Area of reserved forests to total land area of the State ...	13.3%
3.	Area of reserved lands ...	3,826 sq. km. or 1,477 sq. miles
4.	Output of timber ...	43,044 cubic metres
5.	Quantity of fuel extracted ...	404,108 cubic metres
6.	Quantity of sandalwood extracted ...	1,975 cubic metres
7.	Revenue realised ...	Rs. 2.52 crores

MINERALS

Variety

38. The State has a variety of minerals. They are salt, limestone, magnesite, gypsum, crude mica, bauxite, ilmenite, fireclay, lignite, iron ore, etc. A few are exploited commercially. The rest are small deposits. Lignite, magnesite, gypsum, limestone salt and clay are the minerals exploited on a commercial basis. Salem magnesite reserves are among the best in the country. Large quantities of limestone and clay are available in Tirunelveli, Ramanathapuram, Tiruchirapalli and Salem districts. Madras State is one of the largest producers of common salt from sea water in the country. However, the mineral production in the State contributes an insignificant amount to its net output. In 1957 the value of minerals produced formed 1.30% of the value of India's mineral production and gave Rs. 0.69 worth of mineral output per capita when compared with Rs. 2. 82 np in India. Approximately salt contributes 50 % of the mineral production, limestone 20%, magnesite 11%, ilmenite 9%, and gypsum 6%. Small quantities of bauxite and iron ore are available and no industrial fuel has been produced. The Neyveli Lignite Project provides for mining lignite

to the tune of 3.5 million tons for use as fuel in a fertilizer plant and a power generation unit and for conversion into briquettes for use as domestic fuel.

Distribution

39. The districts of Coimbatore, Salem, South Arcot, Tiruchirapalli and Tirunelveli posses most of the mineral deposits of the State. Coimbatore has iron ore and gypsum; Salem bauxite, iron ore and magnesite; South Arcot lignite; Tiruchirapalli limestone, gypsum and fireclay; Tirunelveli limestone and ilmenite and Kanyakumari district ilmenite. The quality of iron available in the State is very poor with its low iron and high silica content. No metallurgical coke is also found. With an estimated capacity of 20,000 tons per annum, the bauxite deposits cannot be considered to be large. The deposits of gypsum in Tiruchirapalli district have been estimated at 15 million tons.

Salem iron ore

40. Iron ores are found in Salem and to an extent in Tiruchirapalli and North Arcot districts. The deposits are estimated at over 300 million tons. The quality is inferior with its iron content varying from 35 to 40%. Little or no sulphur is found and the phosphorous content is variable and in some cases high. In Salem the principal deposits and the estimated reserves to a depth of 100 feet are:

Deposits		Reserves (million tons)
1. Kanjamalai	...	55.0
2. Bilur	...	40.0
3. Thirthamalai	...	47.5
4. Villappanpatti Tattayyang-arpettai	...	61.0

Besides possessing large reserves of iron ore, Salem has easy accessibility to cheap power, water and a number of contributary materials like magnesite, chromite, quartz, bauxite, limestone and dolomite. The grade of the iron ore however, is poor with an average iron content of 36% when compared with over 60% in Orissa and the silica content in many cases is as high as 50%. The deposits in Salem district can yield with open cast mining, a sufficiently large quantity of iron ore for several years.

Lignite

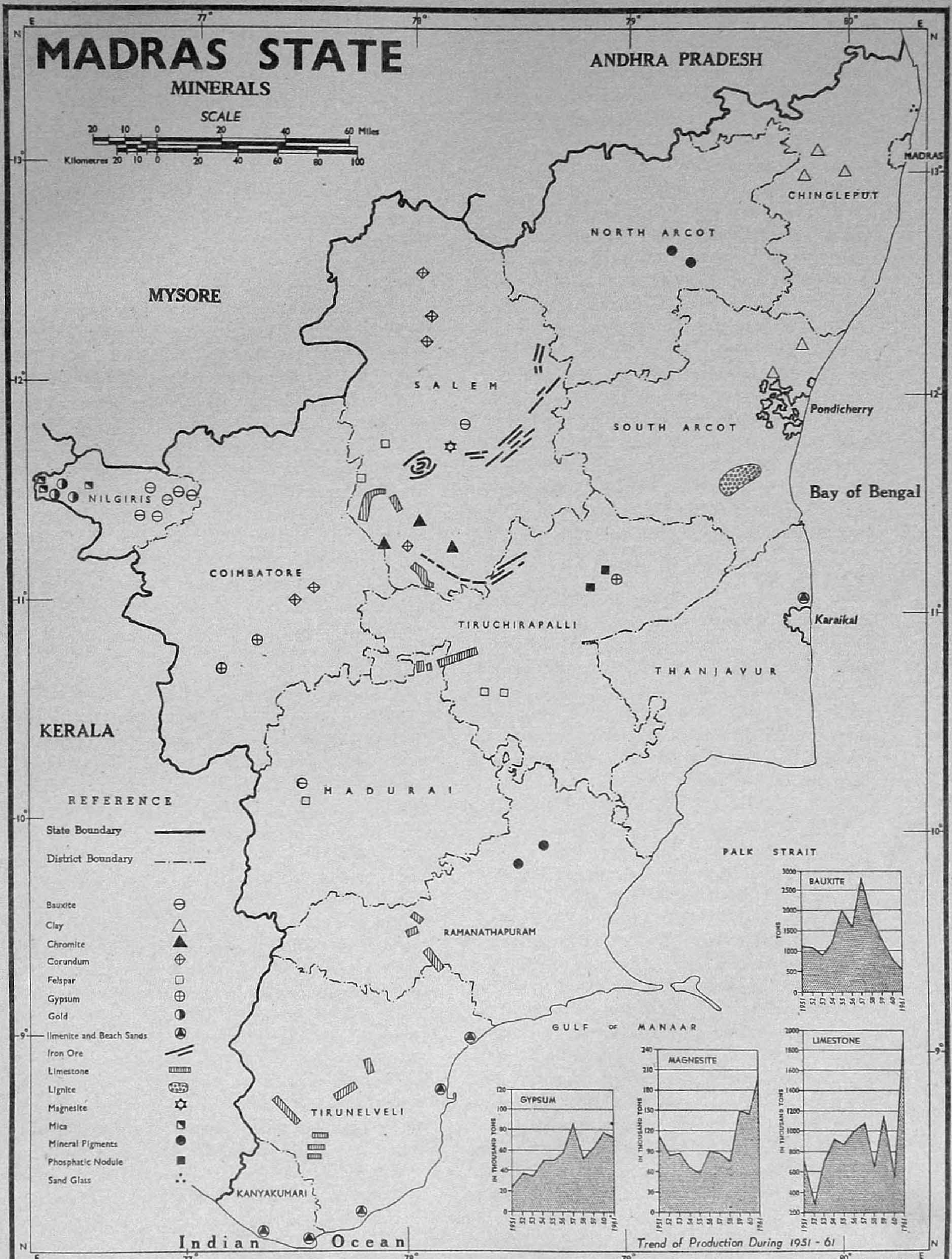
41. Large deposits of lignite of low grade fuel are found in the South Arcot district of the State. Known reserves of lignite are estimated at 2,000 million tons spred over an area of 100 square miles. The workable deposits of 200 million tons are spread over an area of 5½ square miles in Neyveli.

Bauxite

42. The main occurrence of bauxite in Madras State is in the Shevaroy hills in Salem district. The production of bauxite was 789 metric tons in 1960 valued at Rs. 16,000/- Bauxite is the ore used for making aluminium metal, but is also used for the manufacture of refractories. The reserves are estimated at 6.7 million tons and the quality of the ore is found to be satisfactory when compared with other major deposits in the country. The ore contains roughly 45 to 50% alumina, about 20% of ferric oxide, 5 to 6% silica and 25% water. Yercaud bauxite is being utilised at present for the manufacture of refractories. Bauxite production in 1957 was about 2,800 tons.

Magnesite

43. The reserves of magnesite are practically unlimited. The Chalk hills between Salem and Shevaroys contain large quantities of magnesite and the Salem deposits are the largest in the country. The main deposits at the Chalk hills are estimated at 82 million tons while the smaller deposits in Sriangamer and Sirapalli are estimated at 100,000 tons and 325,000 tons respectively. The quality of the ore is high. The crude material has over 95% carbonate. The lightly calcined magnesia is used in making cement of a very high order, in the manufacture of paper pulp from wood, of colourless and scientific glassware and of rubber. Magnesium alloys are preferred to aluminium alloys for lightness and strength and are used in the manufacture of aeroplane parts. It is also used as inner lining in various metallurgical furnaces because of its refractoriness. The demand for magnesia is increasing in paper, glass, pharmachological, alloy and plastic industries. The production of magnesite in 1957 was 87,000 tons. Production in 1960 was 151,886 metric tons valued at



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Rs. 24 lakhs. 95% of the magnesite output is from Salem.

Gypsum

44. Reserves of gypsum are found in Tiruchirapalli, Tirunelveli, Coimbatore and Chingleput districts. The Tiruchirapalli reserves are considered more important and are estimated at 15 million tons. The mineral is used largely in cement and fertilizer industries. The sedimentary rocks in Tiruchirapalli are used in the manufacture of cement. The deposits are used in the manufacture of sulphuric acid or directly for the conversion of ammonia into ammonium phosphate to be used as fertilizers and for the manufacture of common chalks. The deposits of gypsum and sulphur are found in the low lying areas along the coast. The production of gypsum in 1957 was 69,000 tons or approximately 7% of all-India output. The production in 1960 rose to 82,247 metric tons valued at Rs. 920,000/-

Limestone

45. The mineral is used almost entirely by local cement factories. Large deposits are found in Tiruchirapalli, Ramanathapuram and Tirunelveli districts. Crystalline limestone are known to occur in the vicinity of Sankaridurg. In the limestone of Iveli–Annadanapettai area, the limestone is of exceptionally high grade with magnesia under 1.5%. This variety is useful in the manufacture of bleaching powder. The total quantity that might be expected from Iveli is about 100,000 tons within a depth of 10 feet from the surface. An extension of the limestone belt to the east of this area is also found. Some of the limestones are dolomite in composition and are useful as basic lining for steel furnaces. Limestone is found in Talayuthu ridge near Tirunelveli town. Deposits in portions of this area are of very high grade and are hence reserved for chemical purposes. Cretaceous limestones are used in the construction of pagodas and chatrams as they are soft and are easily worked. Arenaceous limestone is also available at the bed of Ulatur cretaceous rock. This is used as building stone as also in the manufacture of portland cement at Dalmiapuram near Pullambadi. In 1957 the production was 1,116,000 tons,

Ilmenite

46 Another important mineral, ilmenite is found in Kanyakumari and Tirunelveli districts. The deposits of this mineral in Madras State amount to 54%. The production was of the order of 28,000 tons in 1957 representing 8% of all-India production. The quality of the reserves is rather poor compared to the products of the mines in Kerala State. The paint material, titanium dioxide is prepared from ilmenite.

Monazite

47. The mineral constitutes the raw material in preparing thorium nitrate used in the manufacture of gas mantles. Monazite is found in the dunes, in the dry beds of streams draining eastwards from the hills and in the beach sands of Tirunelveli. The deposits of the mineral are small, compared in size, to those of Kerala. It contains phosphorus which is used in the manufacture of fertilizers. Thorium, a substitute for uranium can be extracted from this mineral and it is an important radioactive mineral. Monazite mining will assume greater importance in the event of the establishment of nuclear power plants designed to use thorium.

Salt

48. Salt contributes to a very large extent to the total mineral production of the State. It is obtained by the solar evaporation of brine all along the coast. Madras is next to Bombay in salt production. Tuticorin has a greater concentration of the industry with its 13 large salt works and an annual production of 150,000 tons. It contributes 20% of the total salt production in the State. The production of salt in 1957 was 794,000 tons or 11% of all-India output. The salt production in 1960 was 796,158 metric tons.

Fireclay

49. Fireclay is found in Salem, Tiruchirapalli and Ramanathapuram districts. The main use of this mineral is in refractory-ware and bricks. Tiruchirapalli is the sole producer of this mineral. Production in 1957 was 4,400 tons and in 1960 it was 15,839 metric tons.

Garnets

50. Garnets are found in crystalline

metamorphic rocks in Salem district near Sankaridurg and near Mel Amatur in Tirunelveli district. *Garnet powder is a valuable grinding* agent for precious stones and is used in making emery paper.

Graphite

51. This occurs in the kankar deposits of Tirunelveli and in the Singampatti hills. In Papanasam, minute quantities of graphite occur as also in Vikramasingapuram in crystalline limestone and gneiss. It has not been possible to mine it profitably.

Corrundum

52. Corrundum is available at Karutapalayam and Gopichettipalayam in Coimbatore district and at Palakol in Salem district. It ranks next to gold in hardness and is in demand in metal work and stone cutting. The production of corrundum in 1960 was 23 metric tons.

Phosphatic nodules

53. It is used in the manufacture of fertilizers. They are found in an area of about 11 to 12 square miles to the south-east and north-east of Ulatur *in Tiruchirapalli district. The estimated reserves* are 8 million tons. They are collected from the surface in a small way.

Beryl

54. This is available in Pattalai in Dharapuram *taluk* of Coimbatore district. Beryl or aquamarine is of a peculiar translucent sea-green colour. This is said to have supplied aquamarine *for some centuries.*

Mica

55. It is found in Nilgiri only, though, workable deposits are found in Coimbatore, Salem, Tiruchirapalli, Madurai and Tirunelveli districts. About 542 tons of mica was produced in 1957. During 1960 crude mica of 114 metric tons were produced which were valued at Rs. 130,000/-.

Celestite

56. Deposits of celestite occur in the Ulatur stage of cretaceous rocks in Tiruchirapalli district. They are used in the manufacture of strontium salts for the beet sugar industry and pyrotechnics. The mineral is available in abundance in the area east of Ulatur and between Karai and Kulkalnatham.

Zicron

57. Zicron, which occurs with monazite and ilmenite, yields Zicronium oxide which is a super refractory used for specific purposes.

Minor minerals

58. Besides the above, small deposits of apatite, copper, chromite, uranium, feldspar, baryte, steatite and kyanite are also available. Either their production is very small or they have not been exploited at all.

FAUNA

Rich wild life

59. The State of Madras is quite rich in wild life. The biggest sanctuary in South India is at Mudumalai to the north of the river Moyar in the Nilgiri district. Among the common wild life are tigers, bisons, sambhurs, cheetahs, wild pigs, bears, deers, elephants, panthers, monkeys, leopards, wild dogs and hyenas. The lion, king of the forest, is not found in the State. Though the State has abundant cattle wealth scattered throughout the State, it does not possess many good breeds. The wild beasts dwell in large groups in and around the Western and Eastern ghats and in other hills and forest areas. Wild birds are also numerous in the State and the Vedanthangal Bird Sanctuary in Chingleput district, 52 miles south of Madras, is one of the oldest bird sanctuaries in South India. Snakes, rats, cats, dogs, pigs, fishes are large in quantity and variegated in quality and are seen in all parts of the State.

Nilgiri—Abode of wild life

60. Nilgiri is the most important place for

wild animals. Game animals found are elephant, tiger, leopard, Indian sloth bear, sambhur, spotted, barking, four-horned and mouse deer, antelope, bison, pig, Nilgiri ibex and wild dog, besides the hares and the fast and sturdy hill jackal which is the quarry of the Ootacamund Hunt. During certain seasons, elephants are found near Kundah. They often stray from the Sathyamangalam hills to the jungles lying around Mettupalayam. Elephants are also seen in Wynad plateau of Gudalur and in the Bhavani valley. Both on the lower levels and the plateau, tigers are seen. Leopards exist in all parts of the Nilgiri district. They seem to prefer the hills to the plains. Bears are seen in the slopes and in the lower country; sambhurs are found all over the district wherever there is a suitable cover and on the plateau, they are found in the Kundahs. Spotted deer are common around Masinagudi. Jungle sheep are common; but four-horned deers are seen only rarely. The little mouse-deer lives only in the thick jungles on the slopes and is rare. Around Sigur, antelopes are found in small numbers. Bisons are seen occasionally near Mettupalayam and in Masinagudi and in the Benne and Mudumalai forests in the north of Nilgiri and Wynaad. Rinderpest are found occasionally. Pigs are numerous in the district. Perhaps the most interesting game animal of the plateau is the Nilgiri ibex which belongs to a strictly Indian genus, the only other species of which is the tark of the Himalayas. This animal occurs nowhere in the world outside the Madras State, with the exception of an ibex on the higher mountains of Abyssinia. It is the only kind living south of the north temperate zone. This ibex which is not peculiar to the Nilgiris is found all along the Western Ghats, southwards including the Anaimalais and Palnis as far as Cape Comorin. It lives on the plateau only and is commonest on the precipitous southern and western sides of the Kundahs. The Nilgiri lungur known as black monkey, the lion-tailed monkey, three kinds of bats and hedgehogs are also found in the slopes. Among the felines are the leopard-cat, the jungle cat and the common tree cat. Three kinds of mongoose occur on the hills, viz. the stripe-necked, the ruddy and the Nilgiri brown variety. Peculiar is the Nilgiri brown variety and the Nilgiri stripped squirrel. The beautiful Malabar squirrel is found in Wynad. The nocturnal flying squirrel inhabits the dense forests low down on the western slopes. Among the rat family are the mole rat and the bush or coffee rat. The usual variety of porcupine is found in the hills. Pigs are also seen in good numbers. Ponies, horses and mules of the area are not of any good breed. Buffaloes, bullocks and cows seen in the region are not indigenous.

The birds of the Nilgiri are numerous and varied at the lower levels (2000 to 4000′ above the sea level) than on the plateau itself. Two common varieties of vultures are seen as birds of prey and they are, long billed brown variety and the white scavenger. Among rarer varieties are the peregrine, pale harrier, marsh harrier, the common buzzard and the white stork. Ten species of owls occur. Among other birds are bee-eaters, king-fishers, horn-bills, parakeets, bulbuls and cuckoos. Game birds include two kinds of green pigeon (the imperial pigeon and the Nilgiri wood-pigeon), pea-fowl, grey jungle fowl, spur-fowl, snipes and wood cocks.

In the streams of the district, two indigenous fishes are found, the stone-loach and a small variety rarely exceeding 2½″, commonly called minnow. In the Bhavani river, numerous species of fishes are found. Indian trouts, small carps and a little loach are also seen.

Reptiles—lizards, snakes, and frogs are in considerable size. Two important varieties of venomous snakes, viz. Trimeresurus strigatus and Callophis nigrescens are seen in Ootacamund and Coonoor. The king or hill cobra, krait and viper are all common in the foot of the hills. Carpet snake is seen in the rocky ground.

Madurai

61. Madurai district has a number of forests and thick woods and abounds in wild animals. Ibex dwells amidst rocky precipices on the upper Palni plateau. Sambhur is seen in considerable numbers in the Palni forests. Bisons are found in Palni, Cumbum valley, Karandamalais and Nagamalais. Tigers and panthers are seen in Palnis. Bears are found in the Palnis, Murugamalais near Periyakulam and on the Natham and Ailur hills. In the extreme south of the Cumbum valley, elephants are found in considerable numbers. They also live in Vannathiparai,

Surunganar and the Kudirayar valleys. In the fuel forests of Natham and Ailur hills, hares and musk deers are found. The jungle sheep, the boar, jackal, large mongoose, the Nilgiri marten cat, the Malabar short-tailed and the brown squirrel are common on the hills of the district. Monkeys, both the ordinary grey variety as well as the black, are common in many places.

Of the small game, snipes are in plenty and they dwell near the tanks in Sholavandan. In the tanks of Tirumangalam, duck and teal are found. Other birds are seen in small numbers. Florican is met with occasionally; sandgrouse occurs near Andipatti; and the woodcock dwells in the Upper Palnis. Eagles of three kinds—the large brown, the crested and the black—are found on the Palnis. Screech owls are common. Crows are abundant on the plains, but rare on the Palnis. Birds of song are rare, but parakeets and minas are common and on the hills blackbirds, bulbuls, parrots and thrushes are also seen. Peacocks are found occasionally in the jungles. Frogs, toads, lizards, chamelions, tortoises, cobras, vipers, carpet snakes and water snakes are found everywhere. So also ants, white ants, wasps, hornets, mosquitoes and caterpillars (velvet puchis and kambli puchis). The lac insect (Lacca laccifera) was introduced in the Vannathiparai valley in 1930 with success.

Fishes found in the district are mostly exotic. In the Kodaikanal lake, the Fisheries Department has introduced three varieties of German carp, viz. the mirror carp, the leather carp and the scale carp as well as the English carp and the tenoll. Among the new varieties introduced are the minor carp in Manalan estate near Chinnamanur, trout in the Upper Palnis and the Tilapia in the tanks south of Madurai.

Among cattle, Tambiran madu are small, active round-barelled animals well known for their trotting powers. Bulls and cows are of good variety. Largest number of sheep and goats are found in Dindigul taluk. The quality of the cattle is generally poor.

Tirunelveli

62. Every South Indian species of wild animals can be found in Tirunelveli district with the exception of elephants. The western region, especially the thick woods at the foot of the Western Ghats are the abode of wild life. In the jungles and the western extremes of the district, tigers are found. Bisons are common in Ambasamudram and Tenkasi while panthers frequent the thick woods in the extreme west. Bears are found in all the dense forest areas. Ibex are numerous in the thick forests above Courtallam and sambhurs are common. Antelopes, jackals and langurs are well distributed.

No special breed of cattle can be found in the district. Ordinary birds like crows, green parrots, grey pelicans are common in the district. Two other types seen are the imperial green birds and the great horn bills. Poisonous snakes are common, particularly in the hill tracts and the black soil regions. The district is famous for its pearl bank of its eastern coast and pearl chippies are found spread throughout the entire length of the coastline.

Salem

63. The wild life of Salem district has considerably diminished in numbers during the last few decades. In the forests of Denkanikota and Anjetti, elephants, cheetahs and deers are found. In the forests of Hosur, bears, hares, tigers and beautiful birds are found. Bisons and elephants are seen on the Javadis while cheetahs and bears are found in most of the hilly tracts. Tigers are rarely seen. Sambhurs are found near Pennagaram and in a few places of Hosur taluk. Hyenas, asses, black bucks, deers of different kinds, wild pigs, a species of armadillo (Pangolin) and a few wolves also dwell in the district. Pea-fowl and jungle-fowl, partridge and quail can be seen throughout the year and duck, teal, snipes, and florican can be seen in seasons. Different varieties of snakes and fishes are also found in the district.

Anaimalais in Coimbatore

64. The Anaimalais in the Coimbatore region is an important abode of wild animals. Innumerable wild beasts and birds can be seen here. White coloured jungle buffalo is a peculiar specie found in large numbers in Manjampatti. In the thick jungles, cocks, foxes, serpents, pigs, deers and bears are seen in large numbers. The most important dwelling place of the elephant is the Anaimalais where it is considered the 'King of the

wild life' and the name of the mountain in Tamil is based on the elephant, 'Anaimalai' meaning elephant hills. A camp for elephants is maintained at Varakaliyaru by the Forest Department. Tigers are also found in the region sometimes.

Several varieties of venomous snakes are found in the district as also pigs, cats, dogs and fishes. The cattle of the district is of good variety. The Kangeyam breed of bulls is famous in the State.

Kanyakumari

65. The fauna of Kanyakumari district is in no sense peculiar, but it is very interesting and variegated. In spite of the limited extent of forests in the district, wild animals are found. Cheetahs, bears, tigers, leopards and wild pigs and other wild lives are found in the forests of high elevation, where the climatic and other conditions are quite suitable. Elephants are also seen in the thick forests of the district. Hyenas, wild dogs, cats, mongoose, fishes and snakes of different varieties are found. Due to the existence of several wild beasts in the area, it is proposed to put up a game sanctuary near Pechipara reservoir in Kalkulam taluk.

Ramanathapuram

66. While there are no wild animals of special variety found in Ramanathapuram region, domestic animals are of good breed. In the island of Rameswaram, a stunted kind of horse called 'Thatoo' is bred in considerable numbers. Deers and antelopes are in large numbers in the Sickal, Kadugusanthai and Sayelgudy jungles in the southern region. Jackal, fox, muscat, mongoose, hare and rabbit could be found in abundance in the coastal jungles. Frogs, toads, lizards, chamelions, tortoises, cobras, vipers, carpet snakes and other loathsome crawlers are found everywhere in the district. The most common insects are white ants, wasps, grasshoppers, black and grey scorpions, spiders, centipedes and mosquitoes. Different varieties of fishes are also seen in the district.

Other districts

67. Nothing remarkable can be said about the fauna of the districts of Chingleput, South Arcot, North Arcot, Thanjavur and Tiruchirapalli. In Chingleput district, wild animals seen are tiger, cheetah, hyena, bear and wolf in small numbers. Jackals and foxes are in plenty. While antelopes are seen in the south-western region of Maduranthakam taluk, sambhur and spotted deer are seen in the Sathyavedu division of Tiruvallur taluk. The number of such animals has dwindled considerably in recent years. Hares, porcupines, grey squirrels, rats, mice and bandicoots are quite common. Big monkeys frequent the Sathyavedu division. Grey monkeys, wild pigs and dogs are also found. Birds that are found in the coastal region are owls, vultures, kites, crows, sparrows, Indian cuckoos, ducks and quails. Reptiles are found to be numerous and deadly cobras are common. Alligators are found in a few big tanks. Fresh water fishes are very small in size. Nothing special can be said about the cattle of the district.

In the North Arcot district, the wild animals found are wild buffaloes, bears, cheetahs, tigers, different types of deers, wild pigs, elephants and monkeys. The Javadi hills and the forests around are the abode of beasts. No variety is found among the wild animals. Elephants in the past used to appear in the Javadis, but now they have completely disappeared. Panthers and bisons are seen in the rocky hills. Apart from these, Indian bears, hyenas, sambhurs, spotted deers, jungle sheep, antelopes, hares and wild pigs also exist in the district in small numbers. Tigers are rarely seen. The most common South Indian birds and reptiles are seen here such as pea-fowls, jungle fowls, partridges, snipes, teals and ducks.

Cattle of the district are well bred and the Punganur cows are famous for their yield. The sheep of the plains are the common long legged red kind, but on the plateau as well as in the west of Polur, a small black breed is met with, called Kurumba sheep carrying a good deal of wool. Over 20 varieties of fish are found in the district.

The fauna of South Arcot district is also not of much interest. Large games are rare. Kalrayan hills were once called as elephant hills, but nowadays elephants are rarely met with. The same is the case with the tiger. While bears are seen in Kalrayans, leopards occur rarely in the Gingee hills. Hyenas are seen in Kallakurichi taluk. Spotted deer dwell in a few groups in the Kalrayans. Antelopes are seen in Kallakurichi and Tirukkoyilur taluks. Rabbits are seen in many

localities and pigs are common. Crocodiles are found in the canals that branch off from the Coleroon river. Among small game, snipes, partridges, hares, quails, florican, teals, ducks, pea-fowls and jungle fowls are seen.

Cattle of the district is of inferior quality. Among sheep, sammeri (long legged red variety with hairy coat) and kurumba goats (with wooly fleece) of black, white or brown colours exist. The bullocks and buffaloes are of ordinary variety.

Fishes are plenty in the tanks. Pomfret, seer, whiting and mullet are better known kinds of fish. Oysters of Cuddalore backwaters enjoy more than a local fame.

In the absence of good forests, Thanjavur and Tiruchirapalli provide little interest in big games. In the small jungle of Kodikadu at Point Calimere, spotted deer, wild pigs and pigs are seen. Jackals and foxes exist everywhere; mongoose are not uncommon; jungle cats are in plenty and civet cats are found occasionally in the thickets and woody places Ordinary grey monkeys are common in Thanjavur. A variety of monkeys with black face and a darker body with a fringe of hair round the face, a short hairy natural cap on the head and a long tail are found in wooded parts. Ponies of small size are seen near Point Calimere. Pigs are also seen in several places. In Tiruchirapalli district, wild pigs, bears and leopards occur in the Pachaimalais and Kollimalais rarely. Bears are found in large numbers. Hyenas and wild dogs occur in several parts. Wolves are occasionally met with in the Ratnagiri hill. In Pudukottai jungles, pigs and spotted deers are common.

There is nothing significant about the cattle. The sheep is poor and small in number in Thanjavur. Tiruchirapalli is, however, rich in sheep and goats and has four kinds of sheep and two kinds of goat. Ponies are not plentiful in Tiruchirapalli district.

Snakes are found in both these districts and the venomous are the cobra, krait, the chain viper and the carpet snake. The birds that are found are the crow, kite, vulture, owl, sparrow, green parakeet, the Indian cuckoo, black-buck, duck, snipe, teal, quail and partridge. Snipe shooting along the banks of the Cauvery is popular. Fishing is common in the coast, estuaries, rivers and tanks. The usual varieties of sea fish, flying fish and the kola are caught in estuaries; the catala, the Indian carp, the gourami, the etroplus, Bengal carps, the rohu and mirgal are found in abundance in the Cauvery reservoir and the rivers and the hilsa occurs in the Coleroon. Different varieties of insects exist in the region in large numbers.

Sanctuaries

68. The Mudumalai Game Sanctuary of Nilgiri district has an area of 114 square miles and offers protection to wild life. The Vedanthangal Birds' Sanctuary in Chingleput district is an old sanctuary and it bustles with activity between November and March every year. Varieties of birds live on the tree tops in perfect amity. The sanctuary consists of a large irrigation tank, part of which is coverd by a mass of low branching Barringtonia trees and the birds have their nests huddled together all over the crowns of these trees. The birds that visit this area and breed in the locality have been in the habit of doing so season after season, for many decades, if not centuries.

FLORA

Species of Madras

69. Madras State has over 4,500 species of flowering plants. The trees which are found in all the districts are Acacia arabica (Karuvelum), Agathi grandiflora (Agathi), Stychnosnux vomica (Etti), the coconut, the arecanut, the palmyra, the jack, the mango, the guava, the mohwa, Bassia longifolia (Iluppai), the silk cotton, the banyan, the peepul and Ficus religiosa (Arasu Maram). Different kinds of weeds are found along the coast especially in maritime districts like Ramanathapuram, Tirunelveli and Kanyakumari. Wattle is found in three varieties in the Nilgiri and they are Acacia molissima, A. dealbata and A. decurrens

(black, silver and green wattle). The most popular trees are the mango, tamarind, coconut, jack, arecanut, palmyra and iluppai. As avenue trees on the roadside, are found various kinds of figs, tamarind, margosa, portia and banyan trees. In a few villages, Dharba weeds, a sacrificial grass used by the Hindus for rituals are seen. Other plants which are sparse are Kattu kuruvai, (Prosophis juliflora), Nonamaram (Morinda tintoria), Karuvela maram (Acacia arabica), Poovarasan (Thespesia populnea), Murungai (Moringa), Athi (Ficus species), Arasan (Ficus religiosa), Alamaram (Ficus benghalensis etc). Flowers like Manjal Arali (Cassia festula), Jasmine, Erukkai (Erythrnia indica), lilies, lotus, roses, cresenthamums, yellow and red (Kanakambaram) are grown everywhere.

Flora of Nilgiri

70. Composite Madras State was a pioneer in the botanical exploration in India. After reorganisation, the floral wealth of Madras has been reduced considerably. The Nilgiri has abundant botancial varieties with its grassy downs, the sholas studded with the red flowered rhododendrons, exquisite ferns of different types including tree ferns, several varieties of orchids and trees with leaves of varied tints. Wide stretches of strobilanthes burst into blue blossoms once in seven years and they vary in colour from pale blue to deep purple as the clouds drift over them. The origin of the name Nilgiri or the Blue Mountains can be traced to these blue flowers. Due to the heavy rainfall in the area, Nilgiri district possesses varied and interesting flora, exceedingly numerous in genera and species. The flowers and vegetables of the temperate world flourish in these places. The area can be divided into four regions as follows:

1) The deciduous forests of the slopes which possess most of the deciduous tropical trees of the State. Besides bamboos, a good variety of timber trees exist in the region like Albizzia odoratissima (Karungalli), Cedrela toona (white cedar), Chloroxylon swietenia (Satinwood), Dalbergia latifolia (rosewood), Hardwickia binata (Acha), Lagerstroemia microcarpa (Venteak), Phyllanthus emblica (Nelli), Pterocarpus marsupium (Vengai), Santalum album (Sandalwood), Schleichera trijuga (Puva), Tectona grandis (Teak), Terminalia tomentosa (Maddhi) Xylia dolabriformis (Irul).

2) Huge trees grow in the moist evergreen forests of the slopes. Reaching 200 or even 250 feet height, one can see beautiful flowers. The evergreen and variegated foliage and colour add to the picturesque scenery of this tract. Several trees are covered with orchids, ferns and moss. Tree ferns, rattans and various creepers are found in large numbers. A conspicuous plant in the area is the Bastard Sago (Caryota urens). The other varieties found here are Acrocarpus (Red fraxinifolius cedar or shingle tree), Artocarpus hirsuta (Angelli or Aynee), Calophyllum tomentosum (Poon spar), Hopea parviflora and Mesua ferrea (Iron wood), Hopea malabarica, Diospyros ebenum (Ebony) and Chickrassia tabularis (Chittagong wood). Though they are not of such good quality as those in deciduous forests the trees are valuable.

3) The trees in the woods of the Nilgiri plateau are smaller and are not of good quality. The chief among them is Eleocarpus oblongus. Besides several species of Eugenia, Euonymus crenulatus, Gordonia obtusa, Hydnocarpus alpinus, Ilex wightiana and Ternstroemia japonica are also found. Orchids are fairly found in this region while ferns and mosses are in plenty.

4) The grassland tract of the plateau is covered with coarse species of grass which are scorched by frost. A good number of herbaceous plants spring up in the region after the month of March. Trees are scattered and the most important are the Rhododendron and Dodonoea viscosa. Kikyu grass (Pennisetem clandestinum), an introduction from Africa, suppresses all indigenous grasses. Large number of Australian Eucalypti, silver oaks and Acacias are grown in Ootacamund and Coonoor, mainly for firewood.

In the region about 6000′ are found to be grasslands with alphines and small bushes like the small blue Parochetus communis and the big yellow Hypericum mysorense. The Forest Department has raised large areas of Eucalyptus globulus, the blue gum of Tasmania and there are extensive plantations of Acacia melanoxylon (Black wood) and Acacia dealbata (Wattle), nutmeg, clover, cocoa, cinnamon, bread fruit, litchi, durian and vanilla thrive well. Of the fruit trees in Nilgiri mention may be made of apple, pear, peach, plum,

persimmon, cherry, strawberry, mulberry and cherimoyer. The plantation crops of the region are rubber in the lower elevations, tea at the higher altitudes with coffee in between.

Palni Hills

71. The flora in the Palni hills including Kadaikanal is said to exhibit a variety of plants ranging from one half to four-fifths of the flora of the whole Indian Peninsula, besides a vast number of species peculiar to themselves. Col. Beddome is stated to have found here over 700 species of plants. Several European varieties are also found. In the higher regions, the four species of palms are the Sago palm, the wild areca palm, the Bentinckia condupana and an alpine species of date. The predominant grass is Andropogineoe, a coarse grass of highly aromatic quality. Among the ferns, mosses and lichens which abound the region, most conspicuous is a branching variety of Alsophila found commonly in thick jungles of the moist banks of streams. Several varieties of grasses tall and short are found. Also are found several herbacious plants, huge thistles and ferns. The commonest plants on roadside hedges found are the species of Rubus (bramble) and among scattered trees Artemisia (mug wort), Polyogonum chinese (knot grass), Heracleum sprengelianum (Cowparsnip) and Plectranthus (Cockspur flower). The commonest ground orchids are Spiranthus australis (ladies tresses), Hebenaria elliptica and Hebenaria galeandra.

Other areas

72. Large paddy fields are found in the deltaic sub-region of tropical Madras diversified with groves of coconuts, mangoes and other trees. No natural eminence is seen in the tract. The flora of the Eastern Ghats is mostly of the drier deciduous type.

The southern and northen sub-regions are similar in vegetation. They are uninteresting as other parts of the Coromandel Coast. The most prominent among the flora of the sea sand is the ubiquitous thorny grass, Spinifex squarrosus, whose ripening seeds in the flower heads roll as balls before the wind—a unique method of self-sowing.

The sea in the neighbourhood of Tuticorin and Rameswaram abounds in many types of sea weeds, one of which is Gracillaria lichenoides. As we proceed inland we come across stunted vegetation like Acacia arabica, Acacia planiforms, screwpine, the palmyra, the wild date and the portia. At the base of hills, the scrub jungle contains thicket and thorns, Zizyphus jujuba, Xyloporous, Albizzia lebek, Caparis horrida, Terminalia belerica and Terminalia chebula. The vegetation in the higher regions can be compared to that found in the eastern slopes of the Nilgiri.

While the flora of the central sub-region to the west of the deltas is similar to that in the northern and southern sub-regions, the flora to the east of Western Ghats has a drier, harsher appearance and leaves are shed by trees during summer.

In the lower hills of the eastern side of the State, the vegetation found is a mixture of evergreen and deciduous plants of marked xerophytic character, low scrub jungles and thorny bushes intermingled with fleshy Euphorbiaceae, Asclepiadaceae and other drought resisting plants. In the salt collecting regions are seen fleshy saline flora. Mangrove swamps are found in the coastal Thanjavur district. The cultivated lands contain innumerable weeds and shrubs scattered in a wide region with a fairly uniform appearance.

Thus, western and southern regions have dense evergeen forests with rich flora. The forests in the south-west region upto Coimbatore are mainly deciduous with teak (Tectona grandis), Terminalia tomentosa, T. coriacea. In the semi-desert region streching from the southern part of Coimbatore district to the coastal strip, the flora consists of small leaved thorny trees and shrubs such as Dalbergia spinosa, D. coromandeliana, and Acacia planiforms. Characteristic plants of the rich flora of the wet region, viz. the Western Ghats and the western plains upto about 6000′ are Hopea Parviflora and the Indian Copal tree (Veteria indica). Xylia xylocarpa occur near the coast teak, rosewood (Dalbergia latifolia, Pterocarpus marsupium) which provide wood for furniture, building etc. and a medicinal gum-resin called kino, Terminalia crenulata and the ornamental Lagerstroemia. Lanceolata are seen in the deciduous inland forest. In the dense forest tracts reed like bamboos, abundance of mosses,

trees and other ferns, the only indigenous conifer (Podocarpus latifolius) and the two tree composites (Vernonia monosis and V. travancorica) are found. The alpine region above 6000′ has open grass lands with alpines and small bushes. Belts of mangroves occur in the deltas of the coast and on the dry foreshores, beefwood trees and creeping sandbinders have been planted.

CHAPTER III

HISTORICAL BACKGROUND

The history of the area which forms today the uni-lingual State of Madras will be of interest to any reader. The concept of Tamilnad has been evolved only in the 20th century and the creation of the State of Madras is an act accomplished by the Parliament of India by redistributing the States on the basis of language. Never has a demand been made by the people of Madras for a linguistic redistribution at any stage. It has always formed part of South India which could be described as that portion of India lying to the South of the Krishna river. Throughout its history it has functioned as an integral part of the larger unit; dynasties belonging to Tamilnad conquering northern areas and dynasties belonging to northern areas conquering Tamilnad. Madras had continuous connection in the past both culturally and politically with those areas which constitute today Kerala, Mysore and Andhra Pradesh. The languages spoken by them belong to the great group of Dravidian languages of which Tamil is the oldest representative. It is, therefore, difficult to conceive of a separate history of Madras State, but what I propose to attempt in this chapter is a short account of the main historical trends of that area popularly known as Tamilnad in Tamil language, and Madras State in English. When the States' Reorganisation took place, the well-known State of Bombay disappeared from the map of India, but the State of Madras remained in spite of a move by certain sections for changing the name into Tamilnad. Thus Madras has a cosmopolitan tradition in which different cultures have intermingled and formed what it is today.

Pre-Dravidians

2. South India was from ancient times inhabited by a people called pre-Dravidians. It is likely that some of the forest and hill tribes of South India like the Irulars, Chenchus, Yanadis, Kadars of Anaimalai hills and the Paniyans of Western Ghats may belong to this race. It may also include the Veddas of Ceylon. They have also a submerged Negrito element which is highlighted in Kadars. Mr. E.M. Thurston, a great authority on South Indian Ethnology is of the view that pre-Dravidian tribes have affinities with the Sakas of the Malay Peninsula and possibly with the Australian Negritos. Some of the pre-Dravidians had also attained some level of civilization when they came into contact with Dravidians.

Dravidians

3. Madras is essentially a land of Dravidians. I mean it in the sense that the majority of Tamilians are Dravidians retaining those characteristics which have distinguished them from all other broad divisions of mankind. The term Dravidian was primarily an equivalent for Tamil, but was extended by Caldwell to denote the family of languages formerly designated Tamulian or Tamulic including all the languages of Southern India—Tamil, Telugu, Malayalam, Kanarese and Tulu. In due course it was used to denote the people of the South who speak the Dravidian languages. In his Census Report of 1901, Mr. Risley has used the term in a much wider sense. He includes in it races extending from Ceylon to the valley of the Ganges and pervading the whole of Madras, Andhra Pradesh, Central Provinces, most of Central India and Chota Nagpur. He regards this as probably the original type of population of India, now modified to a varying extent by the admixture of Aryan, Scythian and Mongolian elements. Nearly all other existing races of India except the Indo-Aryans such as the Rajputs, Jats and Khatris of the Punjab have been classified by him as Scytho-Dravidians, Aryo-Dravidians or Mongolo-Dravidians.

Whatever the origin of Dravidian be, Dravidians have made a substantial and original

contribution to the cultural life of India. Its antiquity and originality are proved by its independence of Aryan influence. Dr. Rabindranath Tagore has remarked as follows: "As a matter of fact the old Dravidian culture was by no means to be despised...the Hindu civilization acquired both richness and depth under the influence of its Dravidian component. Dravidians might not be introspective or metaphysical, but they were artists and they could sing, design and construct. The transcendental thought of the Aryan, by its marriage with the emotional and creative art of the Dravidian gave birth to an offspring which was neither fully Aryan nor Dravidian, but Hindu".

According to the great Historian Vincent Smith the Dravidian religion and social customs differed widely from those of Northern India. Caste was unknown and the religion was centred on the exotic and often orthogenic worship of deities, chief of whom is the Hill God Murugan. The Hindu theory that mankind is divided into four Varnas or groups of castes - Brahmins, Kshatriyas, Vaishyas and Sudras—was wholly foreign to them. The laws of marriage and inheritance also differed completely from those of Aryans. Tradition, as recorded in the ancient Tamil literature indicates that from very early times, wealthy cities existed in the South and many of the refinements and luxuries of life were in common use. The good fortune of Tamilnad or Tamilakam in possessing such commodities as gold, pearls, conch-shells, pepper and choice cotton goods attracted foreign traders from the earliest ages. Commerce gave the wealth required for their civilization and the Dravidians were not afraid to cross the seas. Perhaps the history of the Dravidian civilization has still to be written up by a competent scholar skilled in all the languages required for the study. Generally historians of India have not given adequate attention to the role played by Dravidians in Indian History.

Dravidian Language

4. Dravidian language consists of a family of 20 languages comprising all those spoken in Southern India and some in Central and North India. At mid-20th century there were about 90,000,000 Dravidian speakers. The territory in which they are spoken includes the northern half of Ceylon and extends northward to an irregular line drawn from a point on the Arabian Sea about 100 miles below Goa along with the Western Ghats as far as Kolhapur, then north-east through Hyderabad and farther eastward to the Bay of Bengal. Farther to the north, Dravidian languages are spoken by small tribes in Madhya Pradesh and Orissa and upto the banks of the Ganges in the Rajmahal hills. A Dravidian language is also spoken by the Brahuis of Baluchistan in West Pakistan.

Toda and Kota are closely related to Tamil. Kodagu is an intermediate language between Malayalam and Kannada. Tulu and Telugu diverge more appreciably from other South Indian languages. Five of the Central languages form a closely related group—Kolami, Naiki, Parji, Ollari and Poya Gadaba. Many Gondi dialects and Konda are closely related and the latter is also related to Kui and Juwi dialects. Kui has some features which relate it to Telugu, but in other respects is the most archaic language of the family. Kurukh and Malto are closely related to each other and Brahui shows some features indicating their relation to them. The vocabulary of Brahui has been swamped by Iranian loan words from Baluchi and even Persian.

Tamil, Malayalam, Kannada and Telugu are the four literary languages of the Dravidians. Tamil has a unique and old literature the beginnings of which go back to 2,000 years. The grammar and structure of the Dravidian languages differ completely from the Aryan. The most ancient Tamil literature dating from early centuries of Christian era or even earlier was composed on Dravidian lines and independent of Sanskrit models. The later literature has been influenced by Sanskrit though the influence is much more on Telugu, Kannada and Malayalam. Malayalam is closely allied to old Tamil; from 9th century A.D. some Malayalam characteristics began to appear, but it is from the 15th century that Malayalam literature took its independent line of development. Kannada is a cultured language as old as Tamil. Although we have some Telugu inscriptions dating from the 6th-7th century, the literary career of Telugu started from the

11th century, The oldest datable specimens of a Dravidian language are the Tamil inscriptions found on Shards discovered at Arikamedu near Pondicherry and belonging to the second quarter of the first century A.D.

External Evidence of Tamils

5. Whatever external references can be found on Madras State they are not sufficient to reconstruct its ancient history, but will throw some light on its past. I reproduce below the extracts from Ancient India by Mukerji. "South India was early divided into three principal kingdoms, those of the Cholas, Pandyas and Cheras (Keralas). These are mentioned by Asoka in his inscriptions (R.E. II and XIII) as his Antos or peoples on his frontiers. Asoka calls the third as Keralaputras and mentions a fourth State as Satyaputra which must have been to their south. Asoka also mentions Tamraparni or Ceylon as within his sphere of influence besides South India. South India was known to the Greek writers as Damirike (Ptolemy) and Limyrike (the Periplus) = Tamilakam, land of the Tamil speaking peoples.

Foreign Trade

6. In early times it was known for its economic prosperity as reflected in its export seaborne trade specially with the west. Its forests grew pepper, perfume, spice and betel; its elephants yielded ivory; its mines precious stones such as beryl, gem, diamond, ruby and amethyst and its seas pearl. Its cottage industries produced muslins, silks and textiles. Some of its products are mentioned in Kautilya's Arthasastra in the days of the Maurya Empire. It carried an overseas trade in these articles with Egypt and Arabia in the west and with Suvarnabhumi (Malay Peninsula) and China in the east. The two coasts of South India were bristling with seaports as centres of its sea-borne trade as described in the Periplus, a work of the first century A.D.

In much earlier times, in the Biblical tradition, there is a reference to ships of Tarsish bringing to Solomon the Wise, the Indian imports of ivory, apes and peacocks. Specimens of these are exhibited in the Tutankhaner collection of the Cairo Museum which I personally saw. This would explain how the west borrowed from Tamil the terms for peacock, rice, ginger, cinamon and a few other articles of trade. A Greek drama discovered as written on papyrus even contains many Tamill passages.

Egypt under Greeks traded with India and later under Romans. The Roman trade expanded in the last three centuries B.C.

This trade was coastal till the Greek mariner Hippalus as stated in Pliny's Natural History (first century A.D.) discovered the monsoons in 46 A.D. by which it was carried across the open main and considerably abridged in time. The bulk of this trade was with the Roman Empire which imported heavily from India with the result that it had an adverse balance of trade. Pliny estimates that India drained Rome of its gold valued at 100 million Sesterces (=£ 1,000,000) every year. The Indian imports to Rome have been indicated above. Roman ladies decked in seven folds of muslin paraded the streets of Rome and became a menace to its morals. The Indian goods were sold in the Roman markets at hundred times their original value. This flourishing Indian trade with Rome brought to India an abundance of Roman coins of which hoards are found in several places in South India, especially in Coimbatore and Madura.

The Pandyan King sent an embassy to the Roman Emperor Augustus (first century B.C.). Such embassies were called for in the interests of Roman colonies to be promoted by diplomatic agreements. A Tamil work confirms that these Yavanas (foreign colonists) imported from Rome wine, brass, lead, glass, lamps and vases. Tamil Kings employed as their bodyguards the trained Roman soldiery with their long coats. They are called 'dumb Mlechchhas' in Tamil works because they could not speak with the Indians. Roman Cohorts were garrisoned at port towns like Muziris and Bakare. The great port of Kaveripaddinam (Puhar) had its foreign settlements and warehouses and was a centre of trade and prosperity. Persecution drove some Jews to settle in the Malabar Coast in 68 A.D. Probably a temple of Augustus was built at Muziris.

The Periplus mentions the following main port towns: (1) Baryagaza (Bhroach) (2) Souppara (Sopara) (3) Kalliena (Kalyana) (4) Tyndis

(5) Muziris (Cranganore) and (6) Nelkynda. On the Coromandel coast were several marts full of Indian ships trading with Golden Chersonese (Suvarnabhumi) and Golden Chryse (Suvarna-dvipa). The Chola ports were equipped with lighthouses. The Periplus mentions Hindu ships on Persian, Arabian and African coasts and also Hindu settlements. India imported from Arabia its gem and from East Africa its gold. Ptolemy gives a detailed account of some of the inland cities of South India. At Arekamedu near Pondicherry have been found examples of Arretine pottery and a fragment of Roman lamp. Arretine pottery was made at Arezzo, Pozzuoli and a few other places in Italy. At Arekamedu three pieces of the pottery have been found with imprints of potters' stamps on them. One of these is VIBIE and refers to the Vibii or Vibieni, two families of potters who worked at Arezzo from the beginning of the first century B.C. to middle of the first century A.D. Another stamp is that of GAIUS Amurits one of whose dishes was dated to the Clandian period (A.D. 41-54) at Hofheim near Mainz in Germany. This pottery was used in South-East India between A.D. 20-50 (Pre-history in India by F.E.Zenner, p. 24).

The name Pandyas was first mentioned in history in Asoka's inscriptions. The Mahavamsa records the tradition that a Pandya King was powerful enough to conquer Ceylon and rule it between 43 and 29 B.C."

Aryans

7. Aryan penetration into the South is an important stage in its development which began centuries before Christ. It was a peaceful and gradual process. Asoka made an attempt to spread Buddhism in South India about the middle of the 3rd century B.C. Two generations before his time, Bharabahu, the Jain teacher had migrated to Mysore country. Brahmi inscriptions which probably belong to the 3rd century B.C. have been found in different parts of South India. A study of the South Indian inscriptions will show periodical migration of small bands from Northern India, but not of extensive settlements. The older customs, thoughts, religious and social institutions of pre-non-Aryan elements have been retained which in turn have influenced the new settlers. The process of intermingling has been long in operation. It did not, however, alter radically a good number of social ideas and family institutions, religious, marital and other practices.

Tamil Kingdoms

8. At the beginning of the Christian era, the limits of the Tamilnad extended from Tirupati (Venkatam) in the north to Cape Comorin and from the Bay of Bengal to the Arabian Sea. Tamil was spoken throughout the land. The Tamil country was divided into 13 Nadus or provincial regions. Four of these bordered the Arabian Sea, viz. Pooli (sandy), Kudam (wet), Kuttam (land of lakes) and Venad (land of bamboos). They together with the Karkanadu (rocky region) formed the Chera dominion, the capital of which was Vanchi near the foot of the Western Ghats at the mouth of the Periyar river. Musiri was an important seaport located at the mouth of the river. Cape Comorin was a sacred bathing place. Pandyan region consisted of the present districts of Madurai, Ramanathapuram, Tirunelveli and the chief cities were the fort of Korkai in the land of the Parthavar (fisherfolk), the seat of pearl fishery and the great capital city of Madurai whose ruins are now about 6 miles to the south-east of the modern city. North of Pandya lay Chola kingdom. Its older capital was Kaveripattinam at the mouth of the Cauvery river. When it was submerged in sea, Uraiyur near Tiruchirapalli became its capital. The east coast from Pulicat to Tondi in Ramanathapuram district belonged to the Chola dominion. Within this area must be included the little patches of land belonging to tribal chieftains more or less subject to Chola control. Under the Pandyan sphere of influence were the chieftains of Aay round the Podiyil hill and Pehan round the Palnis. The land of the Cheras lay north-west of the Pandyan kingdom along the Western Ghats upto the seaside. It stretched right across the Palghat Gap taking in portions of Salem and Coimbatore. The frontiers of Tamilakam were held by Nannam of Tulu country and the west of Puli of Vengadam (Tirupati). Further north of this frontier line was the land of the Vadukars

(Northerners). Such was the distribution of political power at the beginning of Christian era in Madras State.

Sangam Age

9. No accurate history of the Tamil kingdoms previous to the 7th century A.D. can be attempted in the present state of our knowledge. The only evidences are the poems composed in what is known as Sangam Age. The Sangam literature denotes the works attributed to the three traditional Sangams (literary academies) that are supposed to have flourished in the capitals of the Pandya country, the latest of which was Madurai. The accounts of the first two Sangams are so mythical that no history can be based on them. No work relating to the periods has survived except perhaps the Tolkappiyam, the ancient Tamil grammatical work. A number of Sangham works like Ettuthogai, Pattupattu and Pathinen Kilkanakku, i.e. the eight collections, the ten poems and the eighteen minor works belong to third Sangam. The epics of the Manimekalai and the Silappadikaram are also assigned to this period. The earliest account of the Sangams occurs in the introduction of the commentary on the Iraiyanar Ahapporul which itself is legendary.

Early Chola Imperialism

10. This literature gives a few glimpses of dynastic history. Karikala or the black foot as he was nicknamed was the most famous of all kings mentioned in early Tamil literature. A very powerful king, he defeated the Cheras and Pandyas in a decisive battle. He enlarged the Chola dominion and made the Chola name respected all over Tamilakam and even beyond. He built flood banks for the river Cauvery to prevent frequent inundations which ruined the agriculturists. He was also a great patron of letters. His reign was long and taken along with those of his two predecessors and the next following him constitutes the period of the first Chola ascendency in the south. One main cause of the Chola supremacy in the first century A.D. was the great wealth obtained through the port of Kaveripattinam, then a great emporium. In the reign of his son, however, the port was destroyed by a huge tidal wave. From that time onwards, Cholas sank in power and prestige and their place as an imperial power was taken by the Cheras.

Some time after Karikala, the Cheras under their leader and warrior Senguttavan, the Red Chera (second century A.D.) established a hegemony which did not, however, last long. According to the evidence furnished by the Sangam literature, the son and successor of the Red Chera was defeated in battle at Thalaiyalanganam and taken prisoner by the Pandyan king Nedunchezhian. This resulted in the Pandyan hegemony for several generations (second to fourth centuries A.D.). By then the Pallavas had risen in the north and deprived the Cholas of their northern territory and had established a dominion which was soon to overshadow the traditional Tamil powers.

Pallavas

11. Writing many years ago, the late Dr. V. A. Smith has observed that the Pallavas constitute one of the most mysteries of Indian history. Whatever might be the origin of the Pallavas, whether it is indigenous or foreign, it cannot be denied that they have a definite place in the history of Madras State.

For about 200 years to the middle of the 8th century, Pallavas constituted the most dominant power in the South. Simhavishnu Pallava, (590 A.D.) has claimed that he has conquered the Pandya, Chola and Chera kings as well as the ruler of Ceylon. In the height of their glory, their territories comprised the modern districts of North Arcot, South Arcot, Chingleput, Tiruchirapalli and Thanjavur while their sovereignty extended from the frontier of Orissa on the north to the Pennaiyar or Southern Pennar on the south and from the Bay of Bengal on the east to a line drawn through Salem, Bangalore to the west. The Pallavas had to cede the Vengi province between Krishna and the Godavari to the Chalukyas early in the 7th century and never recovered it. During that century, they attained the highest point of fame and raised the imperishable monuments which constitute their best claim to be remembered by posterity. At the close of the 9th century, the power passed definitely into the hands of Cholas. Mahendravarman I (600 to 630 A.D), Simha Vishnu's son became famous by building many rock cut temples and caves, the

ruined town of Mahendravadi between Arcot and Arkonam and a great reservoir bearing the same name. His achievements are thus described by Dubreuil. "He checked the Chalukyas' invasion at Pullanur. He gave a new impulse to Saivism. He glorified poetry and music. He transferred the taste for rock cut temples from the banks of the Krishna to those of Palar and Cauveri". His successor Narasimha Varman was the most successful and distinguished member of his able dynasty (630 to 668 A.D.). In A.D. 642 he took Watapi (Vadami), the Chalukya capital and presumably killed Pulikesa II thus making the Pallavas the dominant power not only in Tamil land but also in the Deccan. During his period, Kanchi was visited by Hiuen Tsang. He noted that the soil was fertile, well cultivated and credits the inhabitants with virtues of courage, praiseworthiness, public spirit and love of learning. The language was Tamil. The kingdom contained more than 100 Buddhist monasteries occupied by over 10,000 monks while non-Buddhist temples, chiefly those of the new Jainites were nearly as numerous.

Narasimha founded the town of Mamallapuram or Mahabalipuram and caused the execution of the wonderful rathas or 7 pagodas at that place, each of which is cut out from a great rock boulder. He is credited to have built the Kailasanathar temple at Kanchi as well as the shore temple at Mamallapuram. Splendid and numerous structural temples at Kanchi and other temples are slightly later in date. Thus the history of Indian architecture and sculpture begins in the South at the close of the 6th century under Pallava rule. The defeat inflicted in A. D. 740 on the reigning Pallava king by the Chalukyas can be regarded as the beginning of the end of Pallava supremacy. The heirs of Pallavas were not the Chalukyas who had to make way for the Rashtrakutas in A.D. 753, but the Cholas who in alliance with the Pandyas inflicted a decisive defeat on the Pallavas at the close of the 9th century. The Pallava chiefs continued to exist as local rulers down to the 13th century. After the 17th century, all trace of Pallavas as a distinct race or clan disappeared and their blood is now merged in that of the Kallars, Pallis and Vellala castes. Pallavas were great patrons of Sanskrit and did not encourage Tamil till late in their history. In the field of architecture, they have left an imperishable record. They had a complex and hierarchical administration. Mostly they are Brahmanical Hindus, mainly devoted to the cult of Vishnu.

Cholas

12. The later Chola chronology is known as accurately from A. D. 907, the date of accession of Parantaka I, the son and successor of Aditya, the conqueror of Pallava. This was made possible by the revival of the Chola line in Thanjavur by Vijayalaya. The most prominent of the Chola monarchs was Raja Raja, the Great who came to the throne in A.D. 985 and his son Rajendra Chola Deva I whose reign ended in 1035 A.D. The interval of 50 years covers the period of the most decisive Chola supremacy over the other Tamil powers. Raja Raja conquered the whole of Madras State and also large portions of Mysore and Ceylon. He destroyed the fleet of Cheras at Kandalur. He conquered Vengi of Eastern Chalukyas and Mysore of Gangas. Later he subdued Quilon on the Malabar Coast, Kalinga and Ceylon. After A.D. 1005, he spent the rest of his days in peace. Raja Raja possessed a powerful navy and annexed a large number of islands, probably including the Laccadives and Maldives. Rajendra Chola Deva I carried his army even further. He sent fleet across the Bay of Bengal and effected the temporary occupation of Pigu as well as ports of Sumitra, Malaya, Andaman and Nicobar Islands. He even ventured an expedition to the North about A. D. 1023 and defeated Mahipal, the Palar king of Bihar and Bengal. In commemoration of the exploits he assumed the title of Gangikonda Chola. He built in the Tiruchirapalli district a new capital called Gangaikonda Cholapuram, adorned by a magnificient palace, a gigantic temple and a vast artificial lake. Raja Raja was a great builder. The magnificent temple of Raja Rajeswara at Thanjavur was built by him. Although a Saivite himself, he pursued a policy of toleration towards other sects granting them equal privileges.

Later Cholas

13. Raja Raja, the son of Rajendra died on the battle field in Koppam in 1052 A.D. fighting with Chalukyas. Ten years later, the Chalukyas were

defeated in their turn by Cholas in another hard fought contest. King Adi Rajendra was assassinated in A. D. 1074. Rajendra Kulottunga I, the successor (and not the son of Adi Rajendra) was the most conspicuous of the later Cholas who are known as Chalukya Cholas. Rajendra who reigned for 49 years made extensive conquests and also directed an elaborate survey of the dominions in A. D. 1086. During the 13th century, the Chola power gradually declined and later in that century, the Pandyas reasserted themselves and shook off the Chola yoke. The Muslim inroad in 1310 A. D. and the consequent rise of the Hindu empire of Vijayanagar extinguished the Chola dynasty with its institutions.

Pandyas

14. After the middle of the 8th century when the Chalukyas of Deccan were suppressed by the Rashtrakutas and the Pallava power began to decline, the Pandyas came to the forefront. The Pandyan kingdom was, however, one of the ancient States in the extreme south of India. During the period of the Pallava ascendency in the South, the Pandyas were eclipsed, but unlike the Cholas, they had considerable independence.

The important personalities are Nedumaran, Rajasimha and Nedunjadaiyan Parantaka. Nedumaran won victories over the Pallavas and the king of Kerala and annexed several territories. Rajasimha was in possession of the Chera and Chola territories, won victories over his contemporary, Nandivarman Pallavamalla and performed numerous Tulabhara, Hiranyagarbha and Gosahasra ceremonies.

Rajasimha was succeeded by Nedunjadaiyan Parantaka who issued the Velvikudi grant in his third regnal year and probably also the Anamalai record. He defeated the Pallavas at Pennagadam on the south bank of the Cauvery. He brought the whole of the Kongu country under his sway and overran the country of Venad (South Travancore) destroying the strongly fortified port of Vizhinam. He extended his power into the Cauvery Basin and enjoyed a long reign.

Pandya power began to decline against the rising power of Cholas. The difficulty was enhanced by Ceylon. Between 907 and 916 A. D. the Pandyan Rajasimha was defeated by the Chola ruler Parantaka and he fled to Ceylon.

Cheras

15. The land of the ancient Cheras comprised the modern district of Malabar and part of Coimbatore and Cochin-Travancore State. Their capital was Vanchi or Karur, Musiri at the mouth of the Periyar river was a flourishing sea port and had extensive trade with the Yavanas (Greeks and Romans).

There is no doubt that in the second century A. D. the Cheras enjoyed a hegemony over Tamilakam. But the leadership was lost later and the history of the Cheras becomes a blank. Part of the kingdom was incorporated into the Chola empire and in the days of the Pandya revival became subject to the kings of Madurai.

Second Pandyan Empire

16. From 995 to 1216 A. D. the Pandyan kingdom formed an appendage of the Chola empire. But later Pandyas recovered some of their lost power. Pandyan power recovered more under Jatavarman Kulasekara who ruled till 1239 A. D. Till the end of 13th century the power of Pandyas was great and the age has been called the age of the second Pandyan empire. This was facilitated by the eclipse of Chola power. The Pandya epigraphs give an account of their success in war, their patronage of literature and the methods of their adminstration.

In 1251 the famous Jatavarman Sundara Pandya came to the throne. He conquered the whole of South India upto Nellore and Cuddapah, reduced the Chola power to obscurity, absorbed the Kongu country and checked the growing agressions of the Hoysalas. He drove the Hoysalas from Kannanur, subjugated Kopperunchinga of Sendamangalam, occupied Kanchi and defeated Ganapathy, the Kakatiya king besides performing a Virabisheka at Nellore. He beautified the temples of Srirangam and Chidambaram, erecting a golden hall at the latter shrine and covered the sanctuary of the former with gold plates. He went on an expedition into Travancore country and captured Quilon and he is also credited with the conquest according to Mahavamsa. This was the height of Pandyan glory. He was succeeded by Mara Varman Kulasekhara who captured Quilon and conquered Ceylon (1284 A. D.). He had two sons, one Sundara, the legitimate heir who was co-ruler with his father from 1302-1303 and the

other Vira Pandya, a natural son who was associated with the Government from 1296. The two sons quarrelled and the old king was murdered by Sundara who was incensed at the favour shown to his rival. The disputed succession that followed in 1310-1311 gave the opening for the Muslim advance under Malik Kafur, the famous slave general of Ala-ud-din Khilji who invaded the country on behalf of Sundara. He occupied Madurai and left a garrison in it. The rival brothers continued to rule with diminished power for a few years. The second empire of the Pandyas came to a close with the conquest of Pandyan country by Ravivarman Kulasekhara and the subsequent advance of Kakatiyas. This ended the rule of Tamil powers in Madras State.

Madurai Sultanate

17. From the time of Malik Kafur a Mussalman ruler continued at Madurai though with interruptions caused by the frequent rising of the local powers. He became independent of the Sultan of Delhi about 1335 A. D. Thus was established the short-lived Madurai Sultanate. Its short history-1335-1378 was one of the unceasing struggle with the neighbouring Hindu power along the Cauvery-Coleroon frontier. About 1378 A. D. the Madura Sultanate was overthrown and absorbed by the rising power of Vijayanagar and its Naik governors appointed rulers for a long time.

Vijayanagar Empire

18. The raid undertaken by Malik Kafur during the reign of Ala-ud-din Khilji shook the Hindu Kingdoms of South India to their very foundations. Subsequent tyranny of Mohammad Bin Tughluk merely confirmed the worst fears the Hindu rulers of the South entertained in regard to Muslim activities. In the words of Robert Sewell, "everything seemed to be leading upto but one inevitable end-the ruin and devastation of the Hindu provinces, the annihilation of their old royal houses, the destruction of their religion, their temples and their cities. All that the dwellers in the South held most dear seemed tottering to its fall". From this catastrophe, South India was saved by the energy and genius of five brothers, Harihara and Bukka and three younger brothers. They were the pioneers of the Vijayanagar Empire and their rise was facilitated by the reaction which set in South India against the Muslim domination.

Actually, the State was the embodiment of Telugu and Kanarese forms of Hinduism. A remarkable School of Art was developed at Vijayanagar and Literature, both Sanskrit and Telugu was cultivated with success. The subordination of the Madras State to Vijayanagar Empire meant practically the disappearance of not only the Tamil powers, but also the neglect of the Tamil language. It also accelerated the growth of Brahmin influence in South India. The external history of Vijayanagar empire is mainly that of wars with the various Muslim dynasties of the Deccan. In the end, the Muslims who were more vigorous, better mounted and better armed than the Hindus won the long contest. The destruction of the City of Vijayanagar in 1565 effectually put an end to the Hindu empire of the South. But the peninsula to the south of Tungabhadra continued to be essentially Hindu, governed by a multitude of Hindu chiefs. The Vijayanagar empire had also important dealings with the Portuguese who first arrived on the Malabar Coast in 1498 and established themselves permanently at Goa later in 1510.

Harihara died in 1343 and the work of consolidating the new dominion fell to Bukka. Most of the Hindu States in the South willingly acknowledged the suzerainty of Bukka. Kumara Kampana, son of Bukka conquered the chiefs of the country round Conjeevaram and destroyed the power of the Sultanate of Madurai which had grown out of the Governorship set up by Malik Kafur. He reconstructed the temple of Srirangam and Madurai and restored Hindu orthodoxy in Tamil country.

Madras State formed part of the empire. The greatest representative of Vijayanagar dynasty was Krishnadeva Raya. The direct rule of Krishnadeva Raya extended over the whole of South India including Mysore and Travancore-Cochin. He was a great patron of Sanskrit and Telugu literature. He was a great builder and endowed many temples with liberal grants. He was succeeded by a brother, Achutha Raya, 1529-1542 A. D. Early during his reign, Adil Shah of Bijapur took the fortress of Raichur and

Mudkal. He was himself of a violent temper and soon alienated his best friends. His conduct and mode of Government ruined the Hindu cause in Southern India and opened the whole country to the invader though he did not himself live to see the end. Sadasiva Raya was the next ruler whose reign witnessed the decline of Vijayanagar. The real cause of the disaster which befell the Vijayanagar kingdom was the active interference of Sadasiva in the confused politics of the Deccan Sultanates. In 1558, Vijayanagar entered into an alliance with Bijapur against Ahmadnagar. The barbarous activities of forces combined with his own insolence towards the Muhammadan ally, eventually led to the combination of all Deccan Sultans who were prepared for a war against the Hindus. The result was the battle of Talikota in which the combined forces of the Sultans except those of Berar defeated the Vijayanagar force. The defenceless city was abandoned by the weakness of Sadasiva Raya to the tender mercies of the Muslims. The entire population, men, women and children were killed and the City was rased to the ground. What now remains of the once glorious City of Vijayanagar is only some buildings in various stages of dilapidation. The battle shattered to pieces the big empire and opened the flood-gates of Muslim invasion into peninsular India. It facilitated the expansion of both Bijapur and Golconda which annexed large portion of the newly destroyed empire in South India. Another far-reaching result was the distant Viceroys of the Hindu empire established their independence, the most important of them being the Nayaks of Madurai.

Tirumala, brother of Rama Raya took the puppet king Sadasiva to Penukonda, and founded the last dynasty of the Rayas.

We are not concerned with the declining fortunes of the Vijayanagar empire except that it was a descendant of Vijayanagar with its headquarters at Chandragiri who gave permission to the English to found the City of Madras, which altered completely the history of Madras State.

Nayaks of Gingee

19. One effect of the disintegration of the Vijayanagar Empire was the establishment of independent States or Viceroyalties by the Nayak chiefs. Thirumala Nayak of Madurai 1623-1659, was the first to do so. His example was followed by the Nayak chiefs of Tanjore, Gingee and Ikkari. What were important centres of administration in the Vijayanagar Empire thus became independent States. Gingee had an impregnable fortress. The most prominent Nayak of Gingee was Krishnappa of whom a good account is given by a Jesuit traveller. However, Gingee was finally captured by the Bijapur Sultan who exacted tributes from the Nayaks of Tanjore and Madurai.

Nayaks of Tanjore

20. The Tanjore Nayakship was founded in the year 1541, by Sevvappa Nayak who had married the sister of the wife of Achyuta Raya. The viceroyalty of Tanjore was given as dowry. He had done great works of public utility, chief among them being a big tank outside the fort of Tanjore intended for the supply of drinking water to the people and the new Sivaganga fort of Tanjore. He enlarged many temples including those at Tiruvannamalai and Vriddhachalam. He also helped the Portuguese who in his time settled in large numbers in Nagapattinam. Soon after the battle of Talikotta, Tanjore declared its independence. But the Nayaks spent their time in undertaking ambitious military projects which at one stage brought the Bijapur Sultan to the Tanjore frontier. The Sultan also exacted tribute from the Nayak. Eventually, the Marathas took possession of Tanjore.

Nayaks of Madurai

21. The rule of the Nayaks of Madurai was glorious. Its first ruler was Viswanatha Nayak. He made the kingdom of Tiruvadi and South Travancore—a tributary and enlarged and improved the town of Tirunelveli. He was the master of the whole of the Pandyan kingdom and a portion of the Chola territory. The most famous of the Nayaks was Thirumala Nayak, 1623-1659. In his time, Madurai declared independence. His territories included the modern districts of Madurai, Ramanathapuram, Tirunelveli, Coimbatore, Salem, Tiruchirapalli, Pudukottai and a part of Travancore. He had put up magnificent buil-

dings in his capital city of Madurai. Queen Mangammal is equally famous 1689-1706, who acted as a regent to a posthumous son of Ranga Krishna Muthu Veerappa. She was a popular queen and constructed roads, avenues, temples, tanks and choultries.

The Muhammadan power was penetrating deeper in the South. The growth of Mysore as a power also threatened the Nayak dynasties. The Poligar system organised in the days of Viswanatha Nayak had outlived its usefulness. A series of succession quarrels also weakened the power of the Nayaks. The disintegration was complete during the time of Queen Minakshi 1731-1736. By fraud, Chanda Sahib imprisoned Minakshi and proclaimed himself the ruler of Madurai kingdom. Thus ended the Nayak rule and the Hindu domination of Madras State.

Portuguese

22. The first voyage undertaken by Vasco-da-Gama, who landed in Calicut in May 1498 is not only an event of outstanding importance to the world and India but has shaped the destiny of Madras State. Portuguese became the mistress of the sea-route to India. They destroyed the Arab influence on the Malabar Coast and built several factories. In 1510, they seized Goa from the Muslim State of Bijapur and established friendly relations with the Vijayanagar Empire. They developed their commerce in the Bay of Bengal by establishing settlements at San Thome near Madras and at Hugli in Bengal. The object of their policy was to secure the monopoly of Indo-European trade partly by force and partly by treaties with native powers. They did not desire any territorial expansion which would not help their commerce. The Portuguese Indian Church was organised under the guidance of St. Francis Xavier who came to Goa with Jesuits in 1542. He converted the Paravas, the fishermen caste who lived on the Coromandel Coast between Cape Comorin and Adams Bridge in Madras State and the Mukkuvas on the Malabar Coast.

The Portuguese monopoly was shattered by the Dutch in 1595 when they defeated the Portuguese at Bantam in Sumatra. They finally expelled the Portuguese from the Island of Ceylon and South India in 1638-1658. The expulsion of the Portuguese was facilitated by the aid given by the English who defeated the Portuguese fleet off Swaly in Surat Roads. By 1610, the Dutch established factories on the Coromandel Coast at Masulipatam and other places. Pulicat was the first factory founded in Madras State. Nagapattinam was then taken from the Portuguese in 1659. It was made headquarters of Coromandel Coast. Cochin was taken a few years later. In the wars of the 17th century, the naval power of the Dutch played an important role. But they incurred huge expenditure on the maintenance of the Navy and garrisons. By the beginning of the 18th century, the Dutch had allowed their navy to decay and the English replaced them.

French

23. The First French Company for trade with India was formed in 1664 on the initiative of Colbert, the famous minister of Louis XIV. They established factories at Surat and Masulipatam and got from the Sultan of Golconda an exemption from export and import duties for French goods. They also captured Trincomalee and San Thome near Madras, in 1672 but could not hold it long against the Dutch. Then Franco Martin got from Sher Khan Lodi, the Governor of the Lower Carnatic, representing the Sultan of Bijapur, a piece of land on the coast about 15 miles to the north of Cuddalore in 1674. This place developed into a prosperous settlement of Pondicherry by 1701 and became the headquarters of all French settlements in the East. The French began interfering in the internal affairs of the declining Maratha kingdom of Tanjore and they captured Karikal. When the Marathas overran the kingdom and killed Dost Ali in 1740, Pondicherry gave shelter to the families of both the Nawab and Chanda Sahib. Marathas however took Tiruchirapalli and made Chanda Sahib a prisoner and took him to their capital. Such was the situation in the Carnatic when Dupleix assumed the Governorship of Pondicherry in 1741.

English

24. The English East India Company was formed on the last day of 1600. Queen Elizabeth had earlier declared that the ocean was free to all and every nation had the right to use it to its best advantage. The earliest settlement of the English

in India was Surat founded in 1612. On the East Coast, the first settlement was at Masulipatam in 1613 now located in Andhra Pradesh. It was abandoned temporarily in 1628 and English moved to Armagaon situated to the north of the Dutch settlement at Pulicat. The surrounding area was poor and it was soon abandoned. Francis Day, a Member of the Council at Masulipatam began his search for a new trade centre. He got a grant of a strip of land lying three miles to the north of Indo-Portuguese colony near San Thome from the Raja of Chandragiri, a descendant of the last ruling family of Vijayanagar. Here Day built a fort in 1640 which came to be known as Fort St. George. It grew in prosperity and population. By 1652, it was raised to the rank of Presidency. In 1658, all the factories in Bengal and on the Coromandel Coast were made subordinate to it. It grew and prospered in the half century which preceded the outbreak of the Anglo-French wars. The rival powers that now struggled in the Carnatic did not realise the significance of the quiet and gradual strengthening of the English Presidency. Their footholds on the Coromandel Coast were only Fort St. David with the neighbouring town of Cuddalore and the factories at Masulipatam. Thus was set the stage for the Anglo-French rivalry in Carnatic which decided the future of India.

Political scene of South India in 1740

25. In 1740, the political scene of South India was uncertain and confused. Nizam Asaf Jah, the last representative of Aurangazeb school of public duty and integrity was old and fully occupied by the rising power of Marathas in the Western Deccan. South of Hyderabad with its coastal Coromandel strip lay no powerful Hindu State to maintain the balance of power. Instead, there existed in the interior Mysore a remnant of the old Vijayanagar Empire, on the west coast the tiny Malabar States with Cochin and Travancore and on the east, the principalities of Tiruchirapalli, Madurai and Tanjore. Thus the stage was set for the last effort of Muslim expansionism. There was one more factor to complicate the situation, the Marathas. The Tanjore kingdom had a Maratha Raja, a relic of the Maratha invasion of the south in Aurangazeb's time. The existence of the State together with the claim to Chauth or one fourth of revenue gave Peishwa an excuse for interference whenever it suited him. Nawab of Carnatic, Dost Ali was preparing a bid for independence, on the death of Nizam. Tiruchirapalli and then Madurai fell to his son and son-in-law Chanda Sahib. But attacks on Maratha Tanjore were less successful. In 1740 and 1741, Marathas moved down from the North; Dost Ali was killed, Tiruchirapalli taken and Chanda Sahib captured. At this point, Nizam intervened, re-took Tiruchirapalli and replaced Murtaza by an officer of his own, Anwar-ud-din Khan, early in 1743. The new Nawab of Carnatic was but insecurely seated in his Government and was beset by partisans of displaced families. At this stage, Anglo-French struggle broke out in Europe. As French and the British had vital interest in Carnatic, the conflict spread there also. Dupleix had become the Governor of Pondicherry by then. In 1746 the French captured Madras. It was a great and unexpected success. Madras was returned to the English in 1749 by the treaty of Aix-la-Chapelle. The attempt of Nawab of Carnatic to help the British to retake Madras had failed. It proved the superiority of European arms and tactics which were later to prove their sway for the next fifty years and decide the destiny of Madras State. One effect of the war was to raise the military might of the French. Dupleix's mind began to work seriously on the Indian political problem. He made a bid for the South Indian French Empire. He was more than a politician and could see ahead that in the political imbalance in South India, the strength of a well-organised French force, though tiny, would be effective. The events helped him in his designs. The aged Nizam-ul-Mulk died in June 1748 and was succeeded by Nazir Jang, his second son. The succession was disputed by a grandson of Nizam-ul-Mulk, Muzaffar Jang. At this stage, Chanda Sahib who had been taken as a prisoner by Marathas was released and appeared in the Carnatic. Dupleix supported both Muzaffar Jang and Chanda Sahib. At Ambur, Anwar-ud-din was defeated and the brunt of the fighting was borne by the French troops. Anwar-ud-din was slain; his younger son Muhammad Ali fled to Tiruchirapalli in August 1749. It was inevitable that the British should send help to Muhammad Ali at Tiruchira-

palli. It was in their interest to do so. The British also persuaded Nazir Jang to enter Carnatic, but did nothing. Meanwhile the French occupied several places in the vicinity of Gingee and its fortress considered impregnable was carried away by a brilliant feat of arms by Bussy, the famous French General. Dupleix also sent troops by sea to Masulipatam and occupied it. Nazir Jang was slain in the battle of Arcot and the imprisoned Muzaffar Jang was set free and raised to the throne in December 1750. Thus Dupleix became the master of Carnatic. Chanda Sahib was confirmed as the Nawab of Carnatic by Muzaffar Jang. Muzaffar Jang left for his capital in January 1751 accompanied by a French force under Bussy. The Pathan chiefs of Cuddapah, Kurnool and Savanur revolted against Muzaffar Jang and killed him. But Bussy persuaded the leaders of the revolt to choose Salabat Jang, one of the surviving younger brothers as Nizam. Thus the French influence became firm both in Carnatic and in Hyderabad.

The only obstacle to the French was the British and their ally Muhammad Ali. The French arrived in Tiruchirapalli in 1751. At this stage, another genius appeared on the scene who was to change the destiny of the English in India. It was Clive who captured the City of Arcot, the capital of the Nawab of Carnatic, with 210 men. His heroic defence of Arcot against the forces of Chanda Sahib for 50 days gave sufficient time to secure the assistance of Mysore, Tanjore and Maratha chief, Murari Rao. Dupleix still refused to admit any reverses and with infinite resources continued the struggle. But in 1754, he was recalled by the French Government from the Governorship of Pondicherry. His successor Godeheu concluded a treaty in January 1755 under which the French retained their possessions and their special position in Hyderabad. In practice, it was only the restoration of *status quo*. The English had greatly enhanced the reputation and position at the expense of the French.

End of the French power

26. In May 1756 when the Seven Years War broke out in Europe, the French sent an armament under Comte-de-Lally. He was a brave and incorruptible soldier, but had no large vision and was insolent in his manners. He easily occupied Cuddalore and Devicottai. Then Lally decided to march against Tanjore to recover the sum of money due to Dupleix. He ravaged the country near Tanjore with Karaikal as base. But he was soon threatened by the English fleet and had to retreat to Pondicherry. Before that he ordered Bussy to join him leaving only small forces at Masulipatam. But no sooner did Bussy leave for Pondicherry than the Raja of Vijayanagaram revolted against the French and took Vizagapatam. Clive sent troops from Calcutta. A decisive victory was won against the French at Candore. It destroyed the ascendency of the French in Deccan.

In Carnatic, Gingee was captured by Colonel Coote, the new English Commander. Then Arcot fell. In 1761 Pondicherry surrendered to the English. The defeat of Lally in the Carnatic and the supremacy of Clive in Bengal established British ascendency completely. Pondicherry and other settlements were restored to the French by the Treaty of Paris in 1763. They had been dismantled and rendered defenceless. When the next European war broke out between the two nations in 1778, Pondicherry was easily occupied by an English force. Some attempts were made in the course of the revolutionary and the Napoleonic wars to destroy British commerce in Indian seas. But they never met with success. The English had firmly established their power in the Carnatic whose Nawab Muhammad Ali was a puppet in their hands. Actually the defence of Carnatic became the responsibility of the Madras Government which could not maintain a large army without the revenues of Nawab. He was wasteful and got into debt. In 1763 they got the district of Chingleput known as Madras Jagir for the maintenance of army. By this time the equilibrium of the British supremacy had shifted to Bengal with the battle of Plassey. It also meant decrease in the importance of Madras.

Rise of Hyder

27. The next challenge for the supremacy of the English was the rising power of Hyder Ali of Mysore and in the early stages, the English could achieve nothing decisive against him. Actually he invaded Carnatic appearing in the neighbourhood of Madras, dictated his terms of peace including mutual restoration of conquered territo-

ries, exchange of prisoners and mutual assistance in defensive wars. A soldier of fortune, Hyder became the *defacto* ruler of Mysore though nominally subject to the king. Then he began a career of conquest in all directions including Bendore, Malabar and Coimbatore and as far north as Krishna. In 1766 he usurped the throne. In the first Mysore war which followed, Hyder secured a moral and material victory. His army was well organised having been disciplined by French soldiers and his artillery was efficient. He formed a confederacy with Nizam and Marathas to expel the English from India. He descended into the Carnatic with a large army in 1780. The detachment under Col. Baillie was cut off at Palur. Hyder captured Arcot and the position of the English was in danger. But at this stage the Governor General at Calcutta, Warren Hastings showed great promptitude and sent to the Carnatic the veteran General, Sir Eyre Coote. Coote compelled Hyder to raise the siege of Vellore. After a severe struggle, Hyder retired escaping capture in July 1781. He was again defeated and driven into the interior by Coote. Hyder has thus been foiled in every engagement with Coote. With the appearance of a French fleet off Porto-Novo and the capture of Cuddalore by French, the struggle was about to be renewed in the Carnatic when Hyder Ali died in camp near Arcot. Tippu succeeded him and continued the fight. Meanwhile the Bombay Government had sent an army under General Mathews to attack Mangalore and Bendore. Another expedition was sent under Colonel Fullerton which reduced Dindigul, Coimbatore and Palghat and prepared to march against Seringapatam. At this stage, the treaty of Mangalore was concluded in March 1784 according to which mutual conquests were restored. It was the genius and presence of mind of Hastings combined with the military ability of Coote that saved the English in a situation caused by incompetence and corruption of the Madras Government itself.

Regulating Act of 1773

28. Till then the Parliament had never interfered in the internal affairs of the Company. But with the battle of Plassey, its attitude changed. This attitude was reflected in the Regulating Act of 1773 which made a radical change in the constitution of the Government and also in its relations to the Crown. It was the first step taken by Parliament to establish an efficient Government in India. The conflicts between Hastings, the first Governor General and his councillors need not be detailed here as they have no direct bearing on the history of Madras State. But with the enactment of the Regulating Act, Calcutta became the headquarters of British in India and Madras was relegated to a secondary role.

Destruction of Tippu

29. The final stage in the consolidation of the British in Madras was accomplished by Cornwallis, the successor to Hastings. Though a treaty regulated the relationship with Tippu, Cornwallis felt that at any opportunity, Tippu would attack the English. Tippu was in correspondence with the French. Tippu was anxious to obtain control over the State of Travancore which had been placed under British protection. Cornwallis sent General Medows as Governor and Commander-in-Chief of Madras. He occupied all the low country to the south-east of Mysore and captured Dindigul, Palghat and Coimbatore. Cornwallis also formed an alliance with the Marathas and Nizam Ali against Tippu on the basis of an equal division of the conquered territories in July 1790. After a series of campaigns, Cornwallis marched on Seringapatam and began a regular siege (February 1792). Finding his position untenable, Tippu submitted to the harsh terms imposed on him. He ceded half of his territories to the allies, paid the sum of Rs. 3 crores and released all prisoners and delivered his two elder sons as hostages. The English got as their portion of the ceded territories-Malabar, Dindigul, and Baramahal. Baramahal contained important fortresses and some of the passes through which the Mysoreans had made inroads into Madras State. The treaty of Seringapatam restored a temporary balance in the powers of South India and greatly enhanced the prestige of the English. A statue of Cornwallis was erected by the citizens of Madras in the hall of the Connemara Public Library. The subsequent history of the Mysore war has no direct bearing on the affairs in Madras State except that the power of Tippu Sultan was finally overthrown in 1799 thereby making the position of the English secure in South India.

Achievements of Cornwallis

30. Cornwallis also settled succession to the throne of Tanjore which was disputed between Amar Singh, the brother of the late Raja and Serfoji, his adopted son. Cornwallis also induced Nawab Muhammad Ali to arrange for the liquidation of his debts. In 1792 in a new Treaty, he handed over the entire management of the Carnatic at the time of war to the English and to pay a fixed annual sum for the maintenance of the army. Cornwallis effected far-reaching reforms in administration and in the constitution of civil and criminal courts. He checked the abuses practised by the officials and defined their duties and responsibilities. He increased their salaries, but shut Indians out completely from higher posts in the Government.

Consolidation by Wellesley

31. Cornwallis was succeeded by Sir John Shore. Lord Wellesley succeeded Sir John Shore in 1798. The three English Presidencies were unconnected with one another except by the sea. In the southern Presidency except the Jaghir district of Chingleput, the northern circars and the districts of Dindigul, Baramahal and Malabar, the English had only a limited right of taking over the administration of the ill-governed dominions of the Nawab of Carnatic and the Raja of Tanjore during war. His first task was to eliminate Tippu which he did in the fourth Mysore war. He entered into a subsidiary alliance with the Nizam of Hyderabad under which a subsidiary force of officers controlled by the English, but paid by the Nizam was stationed at Hyderabad. After the destruction of Tippu, the English annexed Carnatic and all the lands between Malabar and Carnatic. They also kept a hold on Seringapatam and a few fortresses in Mysore. The basis of the treaty with Nizam was extended; the subsidiary force was increased and the territories that he got from Mysore in 1792 and 1799 were surrendered to the English. The English thus got the districts of Bellary, Cuddapah and Anantapur. Muhammad Ali died in 1795. His successor was incompetent and extravagant. The assumption of the direct administration of the Carnatic was then made. When Tippu fell, among his papers were found letters from Muhammad Ali. After an enquiry, the entire civil and military Government of the Carnatic was assumed by the British and the Nawab was given a pension of 1/5th of the revenues.

Tanjore

32. Serfoji of Tanjore in 1799 signed a treaty handing over the administration of Tanjore to the English retaining the control over the fort of Tanjore and its vicinity. He was given 1/5th of the revenues, as pension. Serfoji died in 1832 when he was succeeded by his only son Sivaji. On the latter's death without male heirs, the title and dignity became extinct under the decision of the Court of Directors. All these annexations and conquests-South Canara, Wynad, the Ceded districts, Carnatic and Tanjore-enlarged the Madras Presidency to its size of 1901. Wellesley can be described as the maker of the Madras Presidency.

Madras in 19th Century

33. Zamindars and Poligars were reduced to subordination and their military retainers were disbanded. They were particularly troublesome in the districts of Madurai and Tirunelveli and successive punitive expeditions had to be made to break down their resistance. The Southern Poligar wars ended in 1801 with the fall of Kattabomman Nayak who fought for his independence. A permanent assessment was introduced among the Poligars. Thus marked the end of the acquisition of Madras Presidency by the English. Their battle with the Marathas did not affect its destiny. In the 19th century, Madras Presidency settled down under the British crown. It constituted one of the three major Presidencies in India. The elimination of foreign influence and the settlement of the limits of the native ruled territory gave stability and paved the way for an era of commercial development. When battles were fought in other parts of India to consolidate the British power, Madras Presidency pursued its tranquil course. Its closest association with the conflict was during the Burmese campaign of 1824 and 1852 when it sent large troops to fight for the British. The Presidency had abundance of stores drawn from its rich natural resources. When the great Sepoy Mutiny of 1857 shook British power to its foundations, the Madras Army stood firm and loyal. It was

the least affected by the upheaval. The Mutiny, however, swept away the last shadows of Mughal empire and the Marathas and the direct government of all Indian territories passed from the company to the crown.

The Government of Madras was vested in the Governor and his Council. No separate history of the Madras State can be conceived except that it functioned as part of the British empire till 1947 when India became independent. It continued till 1953 when Andhra State was formed. By a subsequent reorganisation of States on linguistic basis, Madras became one of the 14 States in India with Tamil as its language.

Two occurrences were in evidence in the history of India. One was the progressive association of Indians not only in administration, but also in the manner of Government. The other was the National Movement led by Mahatma Gandhi for the liberation of India from the British rule. In both these, Madras has played a notable role. But it is not my purpose to discuss its nature in the course of this report.

Major changes between 1901 and 1961

34. At the beginning of this century, Madras was one of the most polyglot of India's great administrative divisions. It had apart from English no fewer than five highly developed languages, each with its own character, literature and traditions.

Table III—1 illustrates the linguistic composition of Madras State from the beginning of this century. In 1901, it had a population of 40.24% of Tamils, 37.06% of Telugus, 7.39% of Malayalees, 3.96% of Kannadigas and 4.69% of Oriyas. These were the five chief languages spoken in the State. It was an administrative unit covering the bulk of the Southern Peninsula, but excluding the native State of Mysore, the British Province of Coorg and two native States of Travancore and Cochin. Again, three small principalities of Pudukottai, Banganapalli and Sandur were enclaved in the State. The first step in the disintegration of the State was taken with the Government of India Act, 1935 when the State of Orissa was formed. As a result of this, the percentage of Oriya population dropped from 3.92% in 1931 to 0.29% in 1951.

However, the major changes that transformed an administrative unit into a unilingual State was taken between 1951 and 1961. The first was the formation of Andhra State, the second was the formation of Kerala and Mysore States. As a consequence of this the Tamil population of the State rose to 83·15%, while Telugu, Malayalam and Kannada speaking population decreased to 9.98%, 1.19% and 2.53% respectively, Oriyas practically disappearing from the State. The machinery with which the Presidency was administered in 1901 has, however, been bequeathed to the residual Madras State. What constituted 22 districts has been reduced to 13, but the executive authority is still vested in a Collector and the districts are sub-divided for administrative purposes into taluks, the chief executive officers of which are called Tahsildars. In this reorganisation, the Princely States of Travancore, Cochin, Coorg and Mysore have disappeared. Principalities of Banganapalli, Pudukottai and Sandur have been merged, the first within Andhra Pradesh, the second within Madras State and the third within Mysore State. Thus a more consolidated State has been formed in which the majority of Tamilians live. It is the southernmost in India.

Factors leading to the formation of the present Madras State.

35. It will be relevant to consider at this stage the factors which have persuaded the States Reorganisation Commission in recommending the constitution of the State of Madras. There has been always a demand for the distribution of State territories on linguistic basis in South India. This demand has been highlighted by the separation of Andhra from the composite Madras State in accordance with the wishes of the people of that area. This left the residuary Madras State as a fairly compact unit, the State being homogenous except mainly for two districts viz., Malabar and South Kanara in a distant and outlandish corner which are not Tamil speaking. There was a strong case for administrative reasons to merge these two tracts with the appropriate State in which the respective language was spoken. The other important change was the transfer of the taluks of Thovala, Agasteeswaram, Kalkulam and Vilavancode from Travancore State to Madras on linguistic considerations and on grounds of geographical

TABLE III — 1

Distribution of population of Madras State by main mother-tongues — 1901 to 1961

Year	Total Population	Tamil	Telugu	Malayalam	Kannada	Oriya	Others
1	2	3	4	5	6	7	8
1901	38,623,066	15,543,383	14,315,304	2,854,145	1,530,688	1,809,336	2,570,210
Percentage to total population	100	40.24	37.06	7.39	3.96	4.69	6.66
1911	41,870,160	17,037,599	15,782,260	3,099,083	1,561,559	1,604,345	2,785,414
Percentage	100	40.69	37.70	7.40	3.73	3.83	6.65
1921	42,794,155	17,556,574	16,143,796	3,226,436	1,504,290	1,573,942	2,789,117
Percentage	100	41.02	37.72	7.54	3.52	3.68	6.52
1931	47,193,602	18,896,718	17,782,898	3,727,254	1,685,543	1,847,449	3,253,740
Percentage	100	40.04	37.68	7.90	3.57	3.92	6.89
1951	57,016,002	24,504,146	21,753,278	5,229,040	2,073,291	163,463	3,292,784
Percentage	100	42.98	38.15	9.17	3.64	0.29	5.77
1961	33,686,953	28,011,099	3,363,579	399,206	853,211	399	1,059,459
Percentage	100	83.15	9.98	1.19	2.53	N	3.15

The figures for 1901 to 1931 include those of the feudatory States of Pudukottai, Banganapalli and Sandur.

contiguity. The demand for Tamil speaking taluks has a history behind it and has assumed a form that prejudices the political and administrative stability of this area. In the process of bringing together the people speaking one language, i.e., all those units of administration which have Tamil as the predominant language, the taluk of Kollegal in Coimbatore district was transferred to Mysore. Thus was Madras State constituted with a population of about 30 millions covering an area of 50,170 sq. miles, a compact and integrated territory to form one of the important units of the Indian Union with a history of stable administration. Neither its administration nor its plans of economic development were affected by this transfer.

Changes after S. R. Act, 1956.

36. As the principle adopted by the States Reorganisation Commission was only to consider districts as units for transfer, it resulted in the Chittoor district containing a large percentage of Tamil population remaining in Andhra Pradesh. There was, therefore, an agitation in favour of the transfer of Tamil speaking people of Chittoor district to Madras State. Similarly, there was a demand that the Telugu speaking people of North Arcot, Chingleput and Salem should be retransferred to Andhra Pradesh. This demand based on linguistic considerations was met in Pataskar Award which the Governments of Andhra Pradesh and Madras accepted and which was implemented by the Parliament of India by the enactment of Andhra Pradesh-Madras Alteration of Boundaries Act, 1959. The consequential changes involved by the implementation of this Act will be found in Annexure III to Chapter I of this report. Thus the process of creating the unilingual State which began in 1935 by the creation of the Orissa State and which gathered momentum in 1953 by the creation of Andhra Pradesh State reached its culmination in 1960 when the Tamil speaking people of Chittoor district were transferred to Madras State along with Tiruttani taluk.

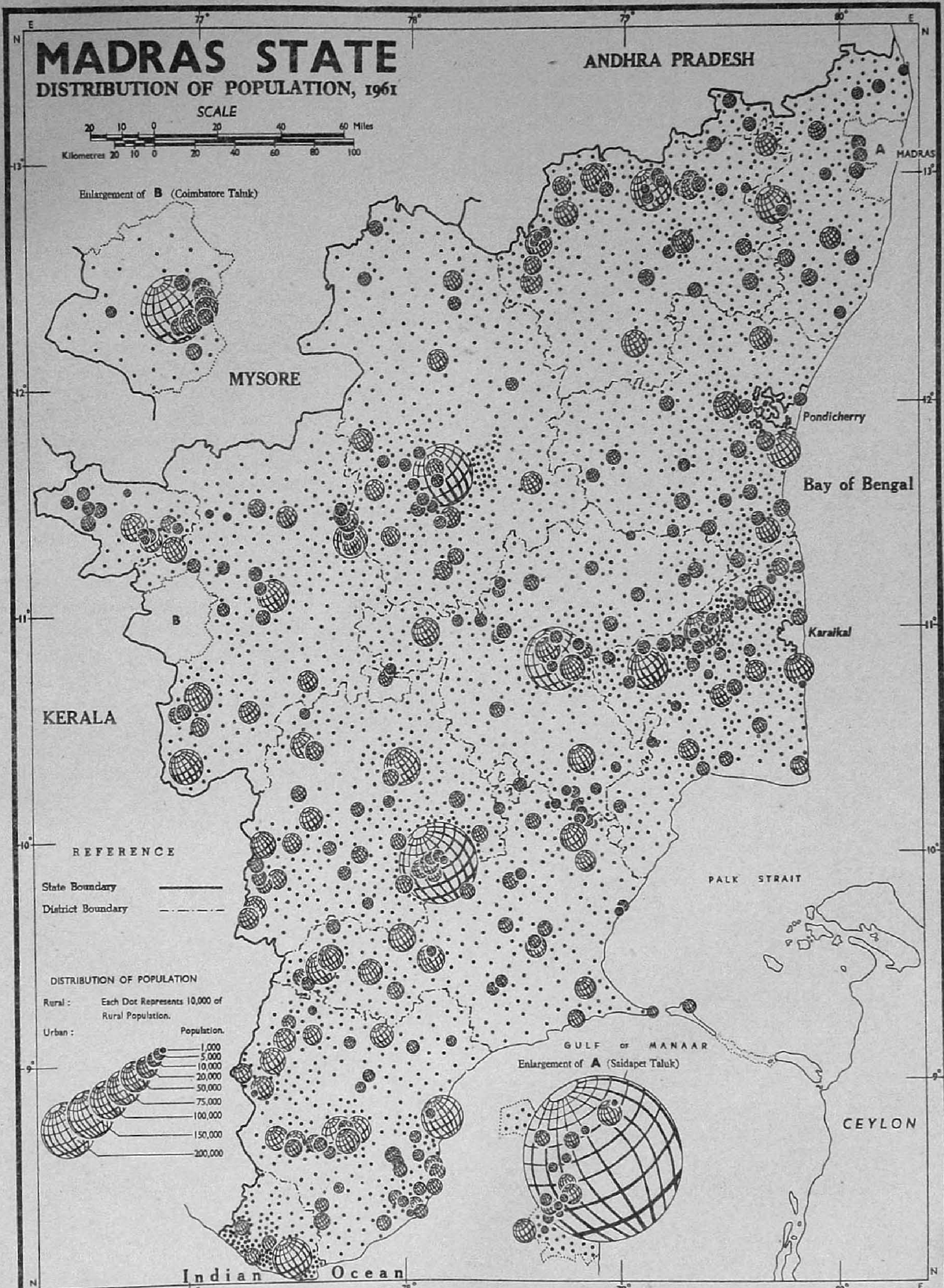
Complex history of Madras.

37. Thus Madras has a complex history of its own. Forming peninsular tropical section of India isolated from the rest of the world by its position and in contact with other countries only by seaborne commerce, it has pursued its own

course, little noticed by and caring little for foreigners. The historian of India, has therefore, given his attention primarily to the North and has given only a secondary place to the story of the far South. No southern power could ever succeed in the North. Dupleix, in the 18th century dreamed of a Franco-Indian Empire with its base in Madras State. It failed. The English attempted to conquer India with Madras as base, but they could succeed only after the battle of Plassey. They acquired the rich Bengal and had command of the Gangetic waterway.

Political and emotional integration

38. Complete political union between the South and the North was not enjoyed by all-India until a full establishment of British sovereignty. The Madras State was never ruled by any sovereign Hindu or Muslim from Delhi. Mauryas exercised authority more or less direct over all-India down to northern parts of Mysore. But even Asoka did not attempt to bring the Tamil kingdoms under his dominion. In the 14th century Mohammad Tughluk for a few years exercised imperfect sovereign powers over the Madras State. Akbar, the great Mughal, did not have any control of Tamil states. At close of the 18th century Aurangzeb's officers levied tribute two or three times from Tanjore and Tiruchirapalli. Thus Aurangazeb could be regarded as being the sovereign of Madras State in a very loose sense. But the political unity of North and South though never attained perfectly in fact, was the ideal of the people throughout centuries. It is this ideal which has made it easy for the British to rule India and for the all-India National Congress under the leadership of Mahatma Gandhi to create a mass movement covering the whole sub-continent. This unity rests on the fact that diverse people of India had developed a peculiar type of culture or civilization. This civilization which can be called Hindustan made her play an effective role in all-India affairs. It has made Madras politically and emotionally part of India. Today, Dr. Radhakrishnan, a citizen of Madras, is the President of Indian Union and the destiny of Indian National Congress, the premier Political Organisation, is guided by another Madras citizen, Sri K. Kamaraj.



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CHAPTER IV

GROWTH AND MOVEMENT OF POPULATION

System of administration

I have in the earlier Chapter given a general account of Madras State. It is one of the 15 major States in India with an area of 50,000 sq. miles and a population of 337 lakhs. For purposes of administration, it is divided into 13 districts. In 1951 the composite State of Madras was divided into 26 districts. No change in the administrative set-up has taken place between 1951 and 1961. Of these, Madras City has a different set-up in administration. In area, it is confined to the limit of the Corporation of Madras and does not include the satellite urban towns which have grown around the city. The revenue function is vested with the Collector of Madras and the law and order with the Commissioner of Police and other residual functions with the Commissioner of Corporation who is controlled by a Council subject to certain statutory limitations imposed by the Government. Thus there is no single authority which is competent to administer the city. All other districts are controlled by the Collectors who are assisted by Superintendents of Police in the maintenance of law and order. Thus a unitary administration exists. Every district is divided into a number of taluks which form the unit for maintenance of revenue records. Two or three taluks are grouped together to form a sub-division which is controlled by a member of the Indian Administrative Service or Madras Civil Service (Executive Branch) in all revenue matters. The set-up of the districts has emerged as a result of the evolution of the district administration in the 19th century and has its roots in the early decade of the century. It has not undergone any vital change during the last 150 years.

Development districts

2. The only attempt made by the Government of Madras during 1951-61 was to group the districts into what is known as development districts. With the exception of the districts of Madras, Kanyakumari, Nilgiri and Chingleput, all other districts, have been divided into two development districts, the details of which are given below :

TABLE IV-1

Area and population of development districts and taluks comprised in each development district

	Development district	Area in sq. miles	Population	Taluks comprised in the district
	1	2	3	4
1	North Vellore	2,253.5	1,817,967	Tiruppattur, Gudiyatham, Vellore, Walajapet and Arkonam
2	South Vellore	2,436.9	1,328,359	Chengam, Polur, Arni, Wandiwash Cheyyar and Tiruvannamalai
3	North Cuddalore	1,907.1	1,363,982	Tirukkoyilur, Villupuram, Tindivanam and Gingee
4	South Cuddalore	2,301.0	1,683,991	Cuddalore, Chidambaram, Vriddhachalam and Kallakurichi
5	Chingleput	3,155.1	2,196,412	All taluks

TABLE IV-1 (Contd.)

Area and population of development districts and taluks comprised in each development district

	Development district	Area in sq. miles	Population	Taluks comprised in the district
	1	2	3	4
6	East Coimbatore	3,154.1	1,492,579	Gopichettipalayam, Bhavani, Dharapuram and Erode
7	West Coimbatore	2,870.5	2,064,892	Coimbatore, Avanashi, Pollachi, Tiruppur, (Palladam) and Udumalpet
8	Kanyakumari	645.5	996,915	All taluks
9	North Madurai	2,289.4	1,233,072	Dindigul, Palni, Kodaikanal and Nilakkottai
10	South Madurai	2,579.5	1,978,155	Madurai, Melur, Periyakulam and Tirumangalam
11	Nilgiri	981.7	409,308	All taluks
12	East Ramanathapuram	3,190.5	1,449,500	Tirupattur, Sivaganga, Tiruvadanai, Paramakudi, Mudukulathur and Ramanathapuram
13	West Ramanathapuram	1,638.1	972,288	Sattur, Srivilliputtur and Aruppu-kkottai
14	North Salem	4,274.8	1,757,336	Hosur, Krishnagiri, Harur, Omalur and Dharmapuri
15	South Salem	2,776.4	2,046,772	Attur, Salem (incl. Yercaud), Nama-kkal, Rasipuram, Tiruchengode and Sankari
16	East Thanjavur	1,781.5	1,642,813	Mannargudi, Tiruthuraipundi, Mayuram, Sirkali, Nagapattinam and Nannilam
17	West Thanjavur	1,957.5	1,603,114	Thanjavur, Orathanad, Pattukkottai, Arantangi, Kumbakonam and Papanasam
18	North Tiruchirapalli	2,745.1	1,877,123	Musiri, Lalgudi, Perambalur, Udai-yarpalayam and Tiruchirapalli
19	South Tiruchirapalli	2,760.1	1,312,955	Karur, Kulittalai, Kulathur, Alan-gudi and Tirumayam
20	North Tirunelveli	2,406.3	1,371,629	Srivaikuntam, Tiruchendur, Sanka-ranayinarkoil and Kovilpatti
21	South Tirunelveli	2,001.2	1,358,650	Tirunelveli, Tenkasi, Shencottah, Ambasamudram and Nanguneri

The idea in creating development districts was that the Collector of the district is overworked and does not have adequate time to supervise the increasing tempo of developmental activity consequent on the formulation of schemes under Five Year Plans. One method of giving relief was to form more districts. The growth of districts in Madras State is an historical process which has nothing to do with area and population and in the course of the century certain forces and centres of interest have developed which will be upset if an area is asked to be administered by a new headquarters. The question of dividing Salem district was considered in all seriousness, but it has been deferred because of the emergency which arose with the Chinese invasion of India. A different experiment has been tried in the district of Coimbatore in which a Joint Collector has been appointed. He has been given full responsibility for the development work in one district and for revenue work in the entire area, the Collector only dealing with the law and order and development work of one district. Another step was taken to appoint District Revenue Officers for 10 districts other than Madras City, Kanyakumari and Nilgiri. He has been put in charge of the revenue duties. Under both, the Collector has been given the overall authority to deal with any matter relating to his district. So in essence, it is only the posting of a Personal Assistant of a higher grade to assist the Collector. Thus one can conclude that no change in the administrative set-up has taken place in Madras State during 1951-61 and even if any administrative change is to take place in future, it is in the direction of having more districts in the State, so that the overall picture of the administration of a district will remain unchanged. I have later examined on the basis of Census data whether it is possible to divide Madras into rational districts.

Concepts of Town / Village

3. Two important concepts employed in Census are town and village. A more scientific definition of town has been made in 1961 Census. How it has changed the number of towns from district to district will be indicated in the Chapter on Urban Population. Whatever has not been treated as a town is a village. Some sanctity has been attached to the concept of the village in Census literature of India, but it has ceased to have any specific significance today. As observed by Molony in 1911, in Madras Census, village was a convenient unit of administration formed for reasons other than statistical or sociological. It always represented a certain area which Revenue authorities have arranged as constituting a convenient unit for administration and the maintenance of records. It would sometimes coincide with the formal habitation unit, but need not necessarily do so and this fact rarely did. In 1961 also, the village has continued as an administrative entity and may consist of one or more residential units. Hamlets are better known in India. They represent residential and social units and are grouped together to form what is known as a revenue village in Madras. For Census statistics, revenue village has ceased to be of any significance. To a large extent they have been replaced by panchayats which consist of one or more villages or parts of villages. The whole State is today divided into 15,078 units. But at the time when enumeration was organised, there were a number of villages not yet covered by panchayats. Thus villages and panchayats constitute the Census units of Madras State in addition to towns. The old concept of a village as an entity living on its own resources has largely disappeared because of the improvement in communication in which the isolation of a village has been shattered. Again improvements have been effected in social amenities available in the village. Sometimes the facilities found in a well developed village in Madras is much better than an urban unit like a municipality. No longer can urbanisation be associated with amenities like drainage, drinking water supply or electricity. What will follow in 1971 Census is a complete disappearance of villages as Census units of Madras State. The entire State has now been covered by panchayats and in 1971 panchayats and towns will form the units of Census administration.

Rural and urban population

4. Madras has today 26·69% of urban population. The variation of urban population with the total urban population is given below for the period 1901 to 1961.

TABLE IV-2

Percentage variation of urban population 1901—61

Year	Persons	Decade variation	Percentage decade variation	Males	Females
1	2	3	4	5	6
1901	2,736,513	...	...	1,336,612	1,399,901
1911	3,168,894	+ 432,381	+15·80	1,559,777	1,609,117
1921	3,441,065	+ 272,171	+ 8·59	1,714,150	1,726,915
1931	4,250,540	+ 809,475	+23·52	2,128,707	2,121,833
1941	5,198,714	+ 948,174	+22·31	2,612,128	2,586,586
1951	7,333,525	+2,134,811	+41·06	3,692,907	3,640,618
1961	8,990,528	+1,657,003	+22·59	4,579,392	4,411,136

A similar statement is given for the rural population. A statement is also given indicating the percentage component of urban population for the years 1901-1961.

Further discussion on urban-rural structure of the population will be found in Chapters on Urban and Rural Population.

TABLE IV-3

Percentage variation of rural population 1901—61

Year	Persons	Decade variation	Percentage decade variation	Males	Females
1	2	3	4	5	6
1901	16,516,117	...	...	8,082,786	8,433,331
1911	17,733,722	+1,217,605	+7·37	8,677,174	9,056,548
1921	18,187,453	+ 453,731	+2·56	8,945,339	9,242,114
1931	19,221,559	+1,034,106	+5·69	9,449,281	9,772,278
1941	21,068,793	+1,847,234	+9·61	10,444,839	10,623,954
1951	22,785,522	+1,716,729	+8·15	11,310,817	11,474,705
1961	24,696,425	+1,910,903	+8·39	12,331,586	12,364,839

TABLE IV-4

Urban population expressed as percentage of total population 1901-61

Year	Percentage of urban population to total population
1	2
1901	14·21
1911	15·16
1921	15.91
1931	18·11
1941	19·79
1951	24·35
1961	26·69

Changes in the jurisdiction of Census Superintendents

5. The following table shows the changes in the jurisdiction of the Superintendent of Census Operations for the period 1871 to 1961. The area which stood at 139,698 sq. miles in 1871 rose to 152, 393 sq. miles in 1891 and fell to 50,155 sq. miles in 1961. A population of 316 lakhs was covered in 1871 as against a population of 337 lakhs in 1961. While the population has remained unchanged, the area has been reduced considerably. There are two reasons for this. One was the large size of Madras State which formed one of the three important units of administration

TABLE IV-5

Changes in the jurisdiction of the Superintendent of Census Operations 1871—1961

Census year	Provinces and Princely States	Number of administrative divisions	Area in square miles	Number of towns and villages	Persons	Males	Females
1	2	3	4	5	6	7	8
1871	Madras and Pudukottai	22	139,698.00	56,700	31,597,872	15,874,235	15,723,637
1881	Madras and Pudukottai	25	141,001.00	52,648	31,170,631	15,421,043	15,749,588
1891	Madras, Travancore, Cochin, Pudukottai, Banganapalli, Sandur, Coorg and Civil and Military Stations of Bangalore	32	152,392.50	58,387	39,604,198	19,619,467	19,984,731
1901	Madras, Pudukottai, Banganapalli, Sandur, Coorg and Civil and Military Stations of Bangalore	27	144,816.00	55,785	38,893,272	19,184,376	19,708,896
1911	do	34	145,519.54	55,119	42,145,970	20,755,039	21,390,931
1921	do	32	145,447.54	53,405	43,076,933	21,251,235	21,825,698
1931	do	31	145,477.50	52,721	47,491,042	23,461,129	24,029,913
1941	do	30	129,028.00	36,656	50,167,716	24,975,526	25,192,190
1951	Madras and Coorg	27	129,022.00	37,868	57,245,407	28,544,330	28,701,077
1961	Madras	13	50,155.00	14,463	33,686,953	16,910,978	16,775,975

in India with Bengal and Bombay. Today there are 15 States of varying sizes. Another reason is the extra territorial jurisdiction given to the Superintendent of Census Operations, Madras over States like Travancore and Cochin. In 1871 and 1881, the Superintendent had jurisdiction over Pudukottai which has now been merged in the present Madras State. In addition, in 1891 the Superintendent had jurisdiction over the States of Travancore and Cochin and the States of Banganapalli and Sandur which are now merged in Andhra Pradesh and Mysore States. From 1901 to 1951 the jurisdiction of the Superintendent was limited to those States which later merged with the Madras State. In 1951 the Superintendent had also jurisdiction over the State of Coorg. In 1961 Madras State got reduced to 50,155 sq. miles. No extra jurisdiction was conferred except to the extent that I had to write the reports relating to Pondicherry State. Every predecessor had covered a big area than my present jurisdiction. Between 1941 and 1951, Pudukottai, Sandur and Banganapalli were merged with the then Madras State and they disappeared from the Census history. The Coorg whose responsibility was entrusted to my predecessor has also disappeared as a distinct unit from the map of India as a result of the States Reorganisation in 1956. The largest area was covered in 1891 and the largest population in 1951. The jurisdiction of Madras State as it was, had the highest area and highest population in 1931.

Houselist, provisional and final population

6. A variation of 2.55% has been recorded between the houstlisting population and the enumeration of 1961. I have discussed in detail

in Part IV-A—Report on Housing and Establishments — Chapter II, the reasons for this variation and also the differences observed from district to district. It can represent four components—Houseless population which was excluded from provisional count during houselisting; the growth of population due to natural increase between the period of houselisting and enumeration; the difference in numbers which will result if a dejure count is adopted as against defacto count (dejure count was made during houselisting and de facto during enumeration); and the omission of the population of strictly military areas. *A close similarity has been maintained* between the two figures which emboldens me to make a claim that the Census enumeration has been properly organised making the count as accurate as possible. I have discussed in Chapter I the difference between the final and provisional count of 1961 Census. The difference need not be discussed further. It is an accepted principle in all advanced countries that an under-count of 1 to 2% can take place in any Census Operation. The post-enumation check has revealed only an under-count of less than 1% for Madras State.

Population projections

7. No projection of population for the State *has been made except by Sri R. A. Gopalaswami*, Registrar General, India, in 1951. His projection will be discussed later.

In 1951, the population of Madras formed 8.34% of India's population. On the assumption that percentages of population among different *States will* remain unchanged between 1951-61, the figures for Madras have been forecast. The assumption cannot be said to be sound for the reason that Southern States of India have always recorded lower increases of population than the Northern States and the birth rate of Madras has always ramained below all-India level. The percentage of the projected population of Madras State has been worked out on the basis of forecast made by Demographers. The following are the forecast on the population of Madras:

Madras Population to India (1951) 8.34%

(From Table A-II Variation in population during 60 years) (In Millions)

	Projections	India	Madras
1	K. Davis	402	33.53
2	Registrar General (1951)	407	33.94
3	A.J. Cole and E.H. Hoover	424	35.36
4	A. Das Gupta	404	33.69
5	T. Chellasami	424	35.36
6	S. N. Agarwala	423	35.28
7	Planning Commission Expert Committee	431	35.95

The actual population is 337 lakhs. While all-India population has tended to rise with every estimate made and the final count has been exceeded, as far as Madras State is concerned, the final count is much below the provisional estimate made by the Planning Commission Expert Committee. As the basis of this forecast, is not known, it is not possible to discuss the reasons for the variation between Madras figures and all-India count. In this connection, it will be relevant to recall the projection made by Sri Gopalaswami in 1951.

A *table (Table IV-6) is presented below in* which the percentage variation of estimated population and the actual population of 1961 has been exhibited.

No State has recorded any appreciable variation in percentages. Highest is recorded by Uttar Pradesh with a percentage difference of 0.72 negative. The next is 0.67 of Madras. On the positive side, West Bengal has recorded 0.67. Though Assam has recorded a high percentage of 34.4, the percentage variation is only 0.25 because of the low population of the State itself. Thus, in this behaviour, Madras exhibits a lesser trend of variation than Uttar Pradesh. Andhra Pradesh has also recorded a negative variation of 0.43. The above statement will tend to show that better enumerated and administered States like Madras and Andhra Pradesh have tended to show lower percentages. All other States have undergone drastic changes during 1941-51 with the result a higher degree of accuracy could not have been attained in 1951. Punjab and Bengal had communal riots and Assam had large areas of *tribal population. States like Gujarat, Rajasthan*

TABLE IV–6

Estimated and enumerated population in different States in 1961

States	Population in 1951	Percentage to population of India in 1951	Estimated population in 1961 applying the percentage in column 3	Enumerated population in 1961 (Census)	Percentage to population of India in 1961	Enumerated minus estimated population	Column 4 – 2 as percentage of column (2)	Column 5 – 2 as percentage of column (2)	Column 6 – 3
1	2	3	4	5	6	7	8	9	10
1. Andhra Pradesh	31,115,259	8·62	37,862,064	35,983,447	8·19	—1,878,617	21·7	15.6	—0·43
2. Assam	8,830,732	2·45	10,761,260	11,872,772	2·70	+1,111,512	21·9	34.4	+0·25
3. Bihar	38,783,778	10·74	47,173,848	46,455,610	10·58	— 718,238	21·6	19.8	—0·16
4. Gujarat	16,262,657	4·50	19,765,579	20,633,350	4·70	+ 867,771	21·5	26.9	+0·20
5. Jammu & Kashmir	3,253,852	0·90	3,953,116	3,560,976	0·81	— 392,140	21·5	9.4	—0·09
6. Kerala	13,549,118	3·75	16,471,316	16,903,715	3·85	+ 432,399	21·6	24.8	+0·10
7. Madhya Pradesh	26,071,637	7·22	31,712,773	32,372,408	7·37	+ 659,635	21·6	24.2	+0·15
8. Madras	30,119,047	8·34	36,632,206	33,686,953	7·67	—2,945,253	21·6	11.8	—0·67
9. Maharashtra	32,002,564	8·86	38,916,228	39,553,718	9·00	+ 637,490	21·6	23.6	+0·14
10. Mysore	19,401,956	5·37	23,586,924	23,586,772	5·37	— 152	21·6	21·6	...
11. Orissa	14,645,946	4·06	17,832,944	17,548,846	4·00	— 284,098	21·8	19·8	—0·06
12. Punjab	16,134,890	4·47	19,633,808	20,306,812	4·62	+ 673,004	21·7	25·9	+0·15
13. Rajasthan	15,970,774	4·42	19,414,191	20,155,602	4·59	+ 741,411	21·6	26·2	+0·17
14. Uttar Pradesh	63,215,742	17·51	76,910,062	73,746,401	16·79	–3,163,661	21·7	16·7	—0·72
15. West Bengal	26,302,386	7·28	31,976,313	34,926,279	7·95	+2,949,966	21·6	32·8	+0·67
16. Union Territories and other areas	5,469,284	1·51	6,632,450	7,941,421	1·81	+1,308,971	21·3	45·2	+0·30
Total	**361,129,622**	**100·00**	**439,235,082**	**439,235,082**	**100·00**	...	**21·6**	**21·6**	

and Madhya Pradesh had large areas of Native States merged between 1947-51 so that the count of 1951 cannot be considered to be as good as the count of 1961. Such States as West Bengal, Rajasthan, Punjab, Madhya Pradesh have recorded much higher percentage of increase in 1951-61 than in 1941-51 tending to pull the population of India to a higher level than was anticipated.

Sri R. A. Gopalaswami, Registrar General, India in 1951 has made the following assumptions:

1) Apart from the disappearance of child marriages, there will be no material change in

marital or conjugal habits; married women of the same number and the same age will be giving birth to approximately the same number of children during each of the 30 years, 1951-80 as on an average of the 30 years—1921-50,

2) The mortality rates in every age group will be approximately the same during each of *the next 30 years—1951-80 as on an average of the* 30 years—1921-50.

The following methodology was adopted. All persons who were aged 10 and over at the Census of 1931 were all alive in 1921 and must have been counted at the 1921 Census. It is possible to identify the corresponding numbers age group by age group. Thus we may compare the number aged 15 to 24 in 1921 with the number aged 25 to 34 in 1931 and express the latter as a proportion of the former. This can be done for three successive 10 year peroids—1921-30, 1931-40 and 1941-50 and an average struck. In this manner an average which may be called the Surviving Population Rate can be struck for every agegroup into which all persons aged 10 and over are divided and for the two sexes separately.

All persons who were under age 10 at the Census of 1931 must have been born after the 1921 Census. They may be divided into four groups: Under age 5 and between ages 5 and 9 separately for males and females. These are the four new population groups at each Census. It is assumed that their numbers are correlated directly to the mean of the numbers of women aged 15-44 at two successive Censuses. The *multiplying factors which when applied to the* latter will yield the former, are then worked out for each of the three decades. Their average is then struck for the three decades—they may be called New Population Rates.

The surviving population rates are reapplied to the 1951 Census figures and the age groups by sexes for 1961 of all persons 10 years and over are obtained. The application of the New Population Rates then completed the 1961 figures by yielding the number of males and females under 5 and those aged 5-9. This process is repeated with reference to the 1961 figures thus obtained and the 1971 figures are secured. By a repetition of the same process in relation to the 1971 figures, 1981 figures are obtained. Sri Gopalaswami's projections for the composite Madras State and those obtained by adjusting them to the present Madras State are given below:

Population Projection for Madras State

	Population (in thousands)								
	All ages			0—14		15—54		55+	
	Population	Males	Females	Males	Females	Males	Females	Males	Females
Composite Madras State									
1921	40,593	20,060	20,533	7,672	7,648	10,763	11,252	1,625	1,633
1931	44,650	22,091	22,559	8,744	8,641	11,771	12,302	1,576	1,616
1941	49,831	24,796	25,035	9,773	9,633	13,233	13,575	1,790	1,827
1951	57,016	28,419	28,597	10,334	10,291	15,599	15,804	2,486	2,502
1961	64,231	32,028	32,203	12,234	12,122	16,915	17,172	2,879	2,909
1971	70,173	35,023	35,150	13,055	12,937	18,831	19,033	3,137	3,180
1981	79,429	39,648	39,781	15,279	15,086	20,986	21,306	3,383	3,389
Present Madras State									
1961	33,935	16,919	17,016	6,463	6,406	8,936	9,073	1,520	1,537
1971	37,069	18,501	18,568	6,896	6,834	9,948	10,054	1,657	1,680
1981	41,959	20,944	21,015	8,071	7,969	11,086	11,255	1,787	1,791

According to his projection, the population of the present Madras State in 1961 should have been 339.35 lakhs. The actual count revealed 336.86 lakhs, a shortage of 2.49 lakhs. He has made similar forecast for Uttar Pradesh and Madhya Pradesh and on the basis of the figures for these States have forecast the population for the whole of India. The upper limit of his forecast was 4,119 lakhs. The actual count revealed 4,390 lakhs. It is, therefore, reasonable to assume that while Madras has justified the forecast made by him, the all-India has not, apparently due to the large increase recorded in States like West Bengal and Assam.

Changes in area of State and districts from 1901 to 1961.

8. I present a table indicating the changes in the area of Madras State between 1901 and 1961 district by district.

TABLE IV-7

Area of districts 1901—61

District	Area in Square Miles 1901	1911	1921	1931	1941	1951	1961 S.G. of India	1961 State Director of Surveys	Difference between 1951 & 61
1	2	3	4	5	6	7	8	9	10
Madras State	**141,705**	**142,330**	**142,260**	**142,277**	**125,819**	**127,427**	**50,331**	**50,155**	**—77,272**
Agency	...	...	19,880	...	...	...	...	...	...
Ganjam	8,372	8,380	4,798	8,383	...	...	...	...	...
Srikakulam	...	...	...	...	...	3,889	...	...	...
Visakhapatnam	17,222	17,221	4,568	17,186	9,068	5,179	...	...	...
Godavari	7,972	6,221	2,545	...	...	...	...	...	...
Godavari East	...	...	...	6,220	6,219	5,682	...	...	...
Godavari West	...	...	...	2,361	2,472	3,015	...	...	...
Krishna	8,498	5,907	5,907	3,547	3,472	3,499	...	...	...
Guntur	...	5,735	5,735	5,757	5,758	5,771			
Nellore	8,761	7,973	7,973	7,949	7,949	7,960	...	...	...
Cuddapah	8,723	5,892	5,918	5,919	5,923	5,929	...	...	...
Kurnool	7,578	7,580	7,580	7,581	7,583	7,836	...	...	...
Bellary	5,714	5,714	5,713	5,713	5,712	5,882	...	...	...
Anantapur	5,557	6,718	6,722	6,741	6,737	6,706	...	...	...
Madras City	27	27	29	29	29	49	49	49	...
Chittoor	...	5,676	5,611	5,901	5,894	5,890	...	...	...
Chingleput	3,079	3,072	3,071	3,091	3,091	3,061	3,031	3,155	+ 94
North Arcot	7,386	4,920	4,954	4,648	4,646	4,654	4,942	4,690	+ 36
Salem	7,530	6,300	6,912	7,058	7,060	7,051	7,028	7,051	...
Coimbatore	7,860	7,196	7,225	7,085	7,108	7,100	6,018	6,025	—1,075
Nilgiri	957	1,009	982	982	983	982	984	982	...
South Arcot	5,217	4,208	4,207	4,208	4,208	4,208	4,204	4,208	...
Thanjavur	3,710	3,727	3,727	3,742	3,741	3,738	3,740	3,739	+ 1
Tiruchirapalli	3,632	4,935	4,319	4,314	4,423	5,505	5,514	5,505	...
Madurai	8,701	4,916	4,907	4,912	4,783	4,869	4,910	4,869	...
Ramanathapuram	...	4,834	4,838	4,819	4,810	4,825	4,849	4,829	+ 4
Tirunelveli	5,389	4,353	4,325	4,315	4,315	4,337	4,419	4,408	+ 71
Malabar	5,795	5,794	5,792	5,794	5,809	5,802	...	...	...
Anjengo	...	1	1	...	...	...	...	...	...
South Kanara	4,025	4,021	4,021	4,021	4,026	4,007	...	...	...
Kanyakumari	...	...	...	...	...	...	643	645	+ 645

In 1901 Madras had an area of 141,705 sq. miles and a population of 38,823,066. The State was divided into 22 districts, the largest being Visakhapatnam with an area of 17,222 sq. miles and the smallest the Madras Corporation with an area of 27 sq. miles.

During the decade 1901-1911, the area of the State increased to 142,330 sq. miles by the transfer of Nugur taluk from Central Provinces. This taluk was added to the district of Godavari Agency Division. In addition to this, modifications in the internal administrative structure were considerable. 22 districts of 1901 were reformed into 25. Guntur district was formed by a shuffling of the boundaries of Krishna, Godavari and Nellore. The Madurai district divided itself into Madurai and Ramanathapuram while North Arcot was split into two districts—North Arcot and Chittoor.

During 1911-1921, the area of Madras State did not undergo any change. The principal change in the boundary of the State was the separation of agency tracts of Ganjam, Vizag and Godavari and the formation of a separate administrative unit called Agency Division. The taluk of Namakkal which in 1910 was transferred from Salem district to Tiruchirapalli was transferred to Salem. New taluks were formed in Ganjam, Krishna, Chingleput, Salem, Tiruchirapalli and South Kanara which resulted in revision of boundaries of adjacent taluks.

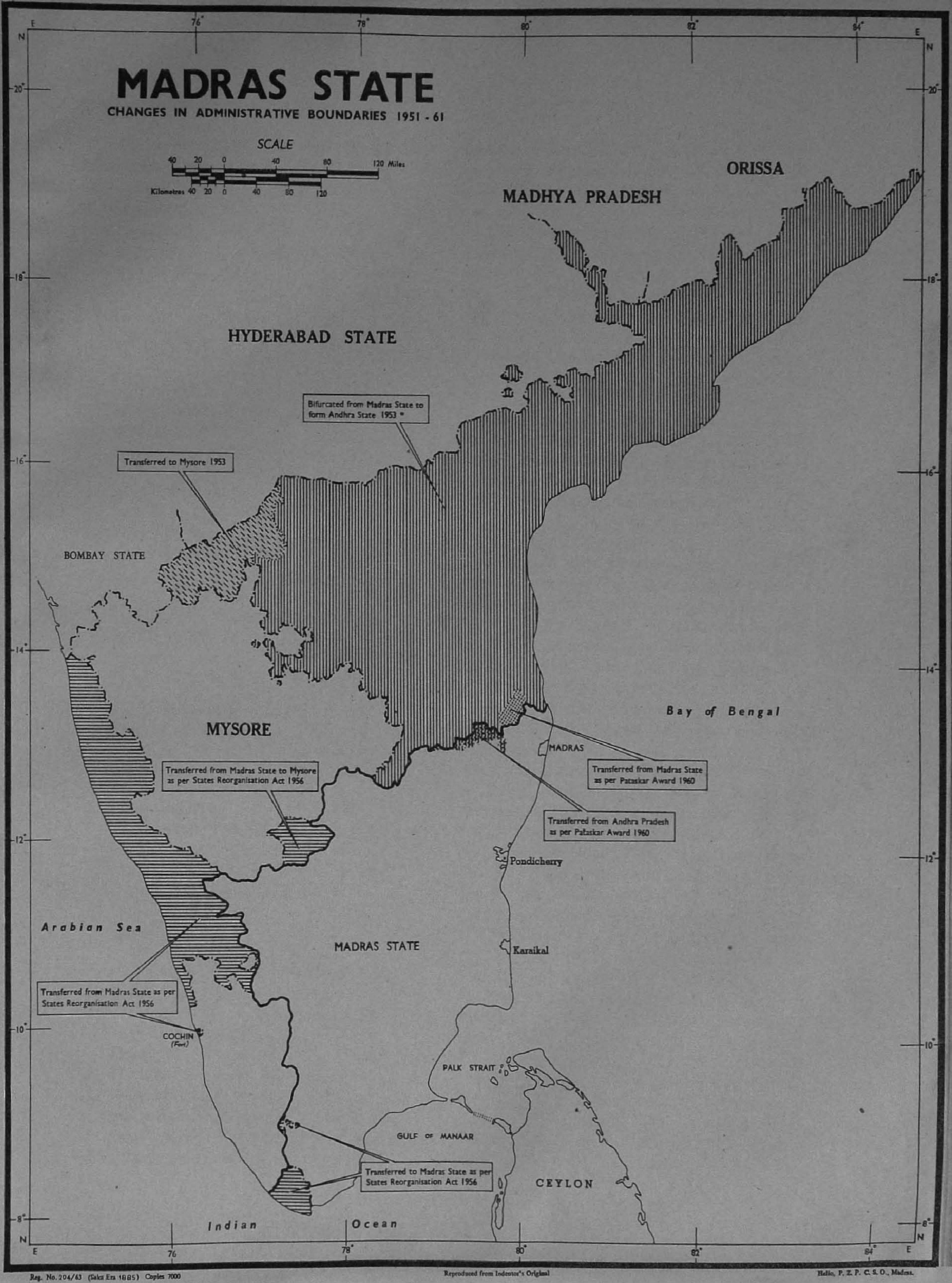
The State boundary did not change during the decade 1921-1931. But the Agency divisions formed in 1921 were reabsorbed in the three districts of Ganjam, Vizag and Godavari. The old Krishna district was split into two in 1925-Krishna and West Godavari. Changes also occurred in the boundaries of Chittoor, North Arcot, Coimbatore and Salem by the transfer to Chittoor of the Kuppam from North Arcot and to Salem-Mettur areas from Coimbatore (Kuppam 305 sq. miles and Mettur area 137 sq. miles).

During the decade 1931-1941 the area of Madras State changed from 142,277 sq. miles in 1931 to 125,819 sq. miles in 1941. This was the result of the formation of Orissa State on 1st April 1936. The following areas were transferred from Madras to Orissa:

1. The Ganjam Agency Tracts
2. The following areas in the non-agency portion of the Ganjam district, viz., taluks of Ghumsur, Aska, Surada, Kodala and Chatrapur.
3. The following areas in Vizag district viz. Jeypore (impartible) estate and much of the Pottangi taluk as was not included in that estate.

During 1951, the area of Madras State increased to 127,427 sq. miles. The merger of the Native States of Pudukottai, Banganapalli and Sandur in 1948 added 1,602 sq. miles. The balance of 6 sq. miles was due to the exchange of enclaves and to the adoption of the revised figures furnished by the Central Survey office, Madras. The changes are indicated below:

1. **South Kanara District** Hebbige, Nagodi and Kotishirur village 2. **Anantapur District** Kanajanahalli, Sarjammanahalli, Kotagarlahalli and Tsautikuntapalli villages 3. **Salem District** Morasur, Madivalam, Ettakodi, Araleri Rayasandiram and Tholalakanapalli villages	Transferred to Mysore State
4. **Malabar District** Portion of Vadavannur Amsom, Peruvemba, Palathulu, Panyur, Koodalur, Elavancheri, Elapully and Thenari villages 5. **Tirunelveli District** Anjengo, Thangasseri and a portion of Panagudi village	Transferred to the United States of Travancore Cochin
6. **Krishna District** Linagagiri, Sarvavaram, Kalavapalli, Lakavaram, Amaravaram, Ganagalanda, Molugumada, Rompimalla and Mallavaram villages	Transferred to Hyderabad State



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The following enclaves were absorbed in Madras State from other States:

1.	**Mysore State** Varadikoppa, Bayappa Reddihalli, Jodi Volgala Koppa, Kayamgattahara-kehinnapalli, Gallahalli, Hosepeta and Chinnara-doddi villages	Absorbed in Chittor district
2.	**Myore State** *Jodikasinayakanahalli*, Gowripura, Jodibommana-halli, Hommagatta Sarvai-nam, Obalapuram, Devara-buddenahalli villages	Absorbed in Bellary district
3.	**Mysore State** Koladasanapura village ...	Absorbed in Salem district
4.	**Mysore State** Badagalpur village ...	Absorbed in Coimbatore district
5.	**United States of Travancore-Cochin** Portions of Chittoor, Nallipulli, Tatamangalam and Vallangi villages	Absorbed in Malabar district
6.	**Hyderabad State** Kodavatikallu. Ustepalli, Partala, Gani Atkur, Mogulur, Battinapadu Ganugupadu, Boravancha Mallavalli and Pullapadu villages.	Absorbed in Krishna district

Visakhapatnam was bifurcated into two districts—Srikakulam and Visakhapatnam in 1950. The Polavaram taluk was transferred from East Godavari to West Godavari.

During the decade 1951—1961 the Madras State recorded an appreciable fall in area i.e. from 127,427 in 1951 to 50,155 in 1961. This was caused by three enactments of the Parliament of India—(1) Andhra State Act of 1953 (2) States Reorganisation Act of 1956 and (3) Andhra Pradesh and Madras (Alteration of Boundaries) Act of 1959 based on Pataskar Award. In October 1953, Andhra State was formed by the transfer of the following districts from Madras—Srikakulam, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Nellore, Anantapur, Cuddapah, Kurnool, Chittoor and three *taluks* of Bellary. The rest of Bellary was transferred to Mysore State on 1st October 1953. Madras lost 67,238 sq.miles. The States Reorganisation of 1956 involved the transfer of Malabar and Kasargode taluk of South Kanara district to Kerala State and South Kanara district except Kasargode taluk and Kollegal taluk of Coimbatore district to Mysore. As against this, Agasteeswaram, Thovala, Kalkulam and Vilavancode taluks of Trivandrum district of Travancore-Cochin State were constituted as Kanyakumari district and transferred to Madras, and Shencottah taluk of Quilon district of Travanvore-Cochin State execpt Aryankavu, Idappalayam and Kazuthayurutti villages of Puliyara Pakuthy, Achancoil village of Achamputhur Pakuthy and a portion of Shencottah Pakuthy with a population of 20 was transferred to Madras State and became part of Tirunelveli district as Shencottah taluk. The resultant loss in area was 10,170 sq. miles.

In 1959, Andhra Pradesh and Madras (Alteration of Boundaries) Act was passed by the Parliament of India. It resulted in the transfer of Tiruttani taluk from Andhra Pradesh to Madras to form part of Chingleput. It also involved the mutual transfer of border villages between the States of Andhra Pradesh and Madras based on language. The net addition to the State was as follows: Chingleput district — 94·51 sq. miles, North Arcot district—36.88 sq. miles. The area of Salem was reduced by 0.20 sq. mile. Thus the Madras State had a net addition of 131.19 sq.miles of area as a result of the implementation of Pataskar Award.

The variation recorded between the figures of the Surveyor General of India and Central Survey Office, Madras is 311.61. sq. miles. The difference is marked in the case of Chingleput, Salem and North Arcot districts. The areas of these districts have changed as a consequence of the implementation of Andhra Pradesh-Madras (Alteration of Boundaries) Act, 1959. The area changes involved have been worked out separately by me. The

are yet to be finalised by Central Survey Office, Madras. The figures adopted by us are :

Chingleput	...	3,155·10
North Arcot	...	4,690·40
Salem	...	7,051.20

resulting in a net addition of 131.19 sq. miles. The difference between the Surveyor General's figure and the Central Survey Office figures will thus be 176.36. The variation from district to district is exhibited in the table below.

TABLE IV-8

Area figures according to Surveyor General and Central Survey Office, Madras

District	Survey of India	C. S. O., Madras
1	2	3
Madras	48.88	48.93
Chingleput	3,030.84	3,060.59
North Arcot	4,941.55	4,653.52
South Arcot	4,203.90	4,208.04
Salem	7,028.30	7,051.40
Coimbatore	6,018.47	6,024.62
Nilgiri	983.70	981.66
Madurai	4,910.20	4,868.81

TABLE IV-8 (Contd.)

Area figures according to Surveyor General and Central Survey Office, Madras.

District	Survey of India	C. S. O., Madras
1	2	3
Tiruchirapalli	5,514.32	5,505.17
Thanjavur	3,739.60	3,738.44
Ramanathapuram	4,849.20	4,828.38
Tirunelveli	4,419.13	4,404.42
Kanyakumari	643.00	645.50

The main reason for such small variation is due to the difference in methods adopted by the Surveyor General and C.S.O., Madras for computation of areas. The figures of Surveyor General are based on a total survey by trigonometrical methods while the areas have been computed by the State Survey Office by adding the areas of component units. The difference is not appreciable enough to warrant any further discussion.

Rank of Madras among the States in India

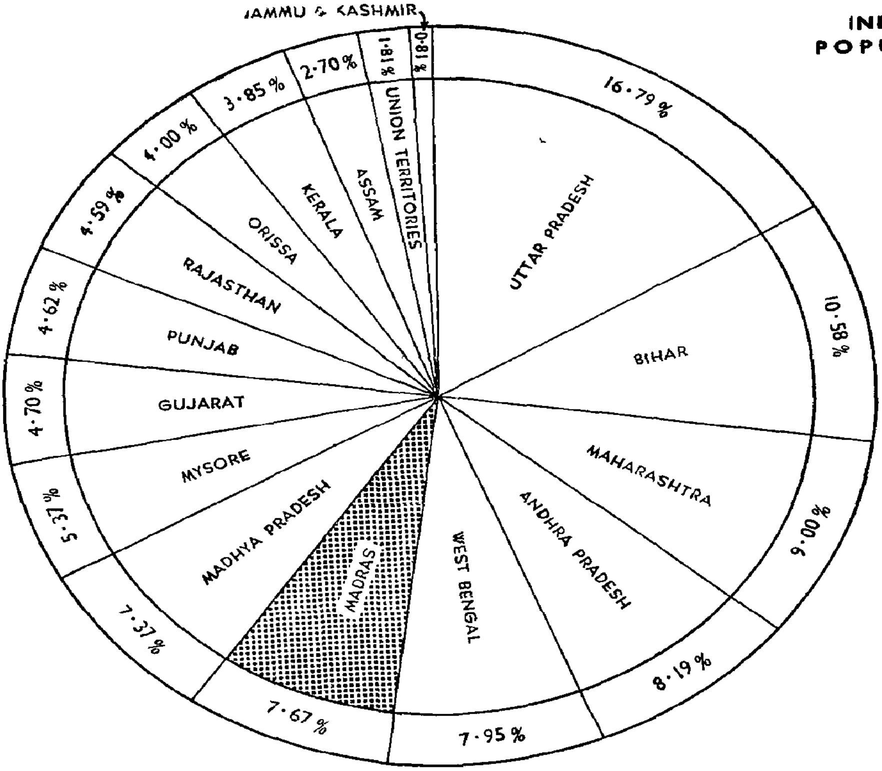
9. I present below a table showing the rank of Madras among other States in area and population.

TABLE IV-9

Rank of the State among the States and Union Territories of India in terms of population and area, 1961 and 1951

Rank in population 1961	Name of State	Percent of India's population in 1961	Percent of India's area	Rank in area	Rank in population in 1951	Density (per sq. mile) 1961	Density (per sq. mile) 1951	Rank in density 1961	Rank in density 1951
1	2	3	4	5	6	7	8	9	10
STATES									
1	Uttar Pradesh	16.79	9.27	4	1	648	555	8	8
2	Bihar	10.58	5.45	8	2	694	579	6	7
3	Maharashtra	9·00	9.63	3	3	334	271	12	12
4	Andhra Pradesh	8.19	8·63	5	4	339	293	11	11
5	West Bengal	7.95	2.78	14	6	1,021	769	5	5
6	Madras	7.67	4.08	11	5	672	601	7	6
7	Madhya Pradesh	7.37	13.76	1	7	192	154	19	19
8	Mysore	5.37	6.01	6	8	319	263	13	13
9	Gujarat	4.70	5.78	7	9	290	229	16	15
10	Punjab	4.62	3.85	12	10	429	341	10	10
11	Rajasthan	4.59	10.74	2	11	153	121	20	20
12	Orissa	4.00	4.90	9	12	292	243	15	14

INDIA 1961
POPULATION



INDIA 1961
AREA

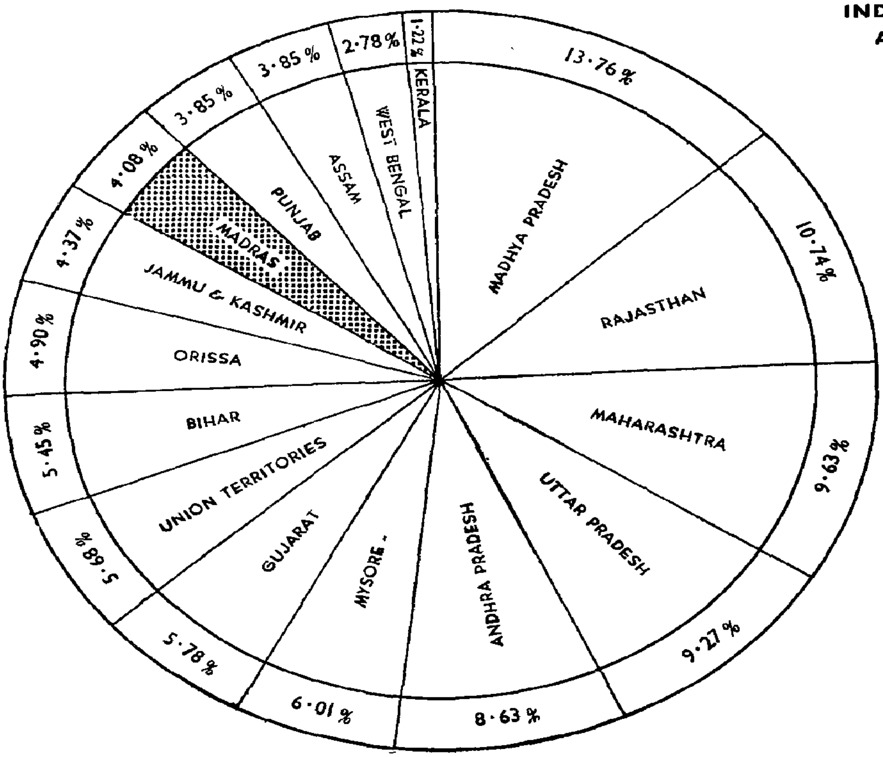


TABLE IV-9 (Contd.)

Rank of the State among the States and Union Territories of India in terms of population and area, 1961 and 1951

Rank in population 1961	Name of State	Percent of India's population in 1961	Percent of India's area	Rank in area	Rank in population in 1951	Density (per sq. mile) 1961	Density (per sq. mile) 1951	Rank in density 1961	Rank in density 1951
1	2	3	4	5	6	7	8	9	10
13	Kerala	3.85	1.22	16	13	1,127	903	4	4
14	Assam	2.70	3.85	13	14	251	187	18	17
15	Jammu and Kashmir*	0.81	4.37	10	15	66	61	23	23
UNION TERRITORIES AND OTHER AREAS									
16	Delhi	0.61	0.05	24	16	4,640	3,044	1	1
17	Himachal Pradesh	0.31	0.87	17	17	126	104	21	21
18	Tripura	0.26	0.34	20	18	277	155	17	18
19	Manipur	0.18	0.70	18	20	90	67	22	22
20	Goa, Daman & Diu	0.14	0.12	23	19	438	417	9	9
21	Nagaland	0 08	0.52	19	22	58	33	24	25
22	Pondicherry	0.08	0.01	26	21	2,040	1,753	3	3
23	North East Frontier Agency*	0.08	2.56	15	N. A.	11	N. A.	27	N. A.
24	Sikkim	0.04	0.23	22	23	58	49	25	24
25	Andaman & Nicobar Islands*	0.01	0.26	21	25	20	10	26	26
26	Dadra and Nagar Haveli	0.01	0.02	25	24	303	217	14	16
27	Laccadive, Minicoy & Amindivi Islands	0.01	0.001	27	26	2,241	1,955	2	2

* Surveyor General's area has been taken into account for calculating the percentage of India's area and density as the State Survey figures are not available

N. A. — Not available

Madras has the eleventh rank out of 15 States in India. But in population it has the sixth rank. In 1951 it had the third rank in area and second in population. In 1951 India, the major States of Madhya Pradesh, Madras, Uttar Pradesh and Bombay ranked in area and Uttar Pradesh, Bihar, Madras and Bombay in population. It had major States of Uttar Pradesh, Punjab, Bihar, Orissa, West Bengal, Assam, Madras, Bombay and Madhya Pradesh and Part B States of Mysore, Travancore-Cochin, Saurashtra and Cutch. The States Reorganisation by which the States were recast in accordance with the language had its maximum effect on areas south of Vindhya Pradesh. Madhya Pradesh also disappeared from the map of India as a unit. In this reorganisation, Madras lost bulk of its territory, nearly 60 percent and 45 percent of its population though it retained its existence as a separate unit with reduced areas. Its rank in area has fallen rather low owing to the vast territorial changes which the State has undergone during 1951-61 resulting in a net loss of about 80,000 sq. miles. This involved also the loss of a good section of its population with the result that its rank became fifth in population. Again it has fallen to sixth in 1961 with the result that West Bengal has gone ahead of Madras. There is a simple explanation for this. Madras has recorded the lowest increase of 11.85 percent while West Bengal has recorded an unusual increase of 34 percent, a good proportion of which has to be explained in terms of migration from East Pakistan. The reasons for the low increase of Madras State has been discussed seperately in the companion volume on the Demographic Trends and Vital Statistics of Madras State.

TABLE IV-10

Comparing State's population, annual rate of increase, sex ratio and density per square kilometre with India and some important countries

1961 Continent and Country	Latest Census	Population			Annual rate of increase	Sex ratio	Density per sq. kilometre of area in 1961
		Persons	Males	Females			
1	2	3	4	5	6	7	8
State	1st March 1961	33,686,953	16,910,978	16,775,975	1.13	992	259
India	do	439,234,771	226,293,201	212,941,570	1.98	941	138
AFRICA							
Nigeria*	— 6—53 — 7—52	* § 30,418,025	14,870,260	15,547,719	1.9	1,046	38
Egypt	20— 9—60	26,059,000	...	...	2.4	...	26
Kenya	2— 8—48	5,405,966	2,680,248	2,725,718	2.3	1,017	12
NORTH AMERICA							
Canada	1— 6—61	18,238,247	...	...	2.6	...	2
Cuba	28— 1—53	5,829,029	2,985,155	2,843,874	2.1	953	59
Mexico	8— 6—60	34,923,129	17,415,320	17,507,809	3.1	1,005	18
U. S. A.	1— 4—60	179,323,175	88,331,494	90,991,681	1.7	1,030	19
SOUTH AMERICA							
Argentina	30— 9—60	20,008,945	10,034,544	9,974,401	1.2	994	7
*Venezuela	26— 2—61	7,523,999	3,729,490*	3,632,213*	4.3	974	8
ASIA							
Burma	1— 2—53	2,940,704	1,499,488	1,441,216	1.0	961	30
Cambodia	— 4—59	4,845,000	2,420,000	2,425,000	...	1,002	29
Ceylon	20— 3—53	8,097,895	4,268,730	3,829,165	2.7	897	151
*China (Mainland)	30— 6—53	582,603,417†	297,553,518	276,652,422	2.3	930	68
China (Taiwan)	16— 9—56	9,367,661	4,772,136	4,595,525	3.6	963	295
*Japan	1—10—60	93,418,501	45,871,194*	47,535,636*	1.0	1,036	252
*Pakistan	1— 2—61	93,831,982	49,308,645‡	44,411,968‡	1.9	901	98
*Thailand	25— 4—60	26,257,848	12,729,018	12,790,947	4.3	1,005	51
EUROPE							
France	10— 5—54	42,843,520	20,551,100	22,292,420	0.9	1,085	83
F. D. R.	25— 9—56	50,963,500	23,898,800	27,064,700	1.2	1,132	215
Greece	19— 3—61	8,387,201	...	...	0.9	...	64
Hungary	1— 1—60	9,976,530	4,815,838	5,160,692	0.6	1,072	107
*Poland	6—12—60	29,731,009	14,374,400*	15,356,600*	1.8	1,068	95
Rumania	21— 2 -56	17,489,450	8,503,420	8,986,030	1.3	1,057	77
*U. K.	23— 4—61	52,675,556*	25,478,000*	27,198,000*	0.5	1,068	215
*Yugoslavia	31— 3—61	18,538,150††	9,029,000*	9,510,000*	1.1	1,053	72
OCEANIA							
Australia	30— 6—61	10,508,191	5,312,284	5,195,907	2.2	978	1
NewZealand	18— 4—61	2,414,984	1,213,376	1,201,608	2.1	990	9

* Provisional

§ Reason for discrepancy between this figure and the sum of frequencies shown for male and female is inclusion in latter of rounded figures for African population of former Northern Cameroons.

† Population registered, plus estimate of 8,397,477 for persons living in out lying areas where local registration offices were not established. Sex break-up of estimate is not available.

‡ Excludes the foreigners, numbering 111,369 for both sexes.

†† Reason for discrepancy between this figure and sum of frequencies for male and feamale is rounding of figure for the latter.

States population, annual rate of increase etc., compared with important countries and other States in India

10. I present in Table IV-10 printed at page 96 a comparable statement of population, annual rate of increase, sex ratio and density per sq. mile of Madras State and some of the important countries in the world based on the Demographic Year Book, 1961.

Excluding Communist China, India has the highest population in the world. It is interesting to compare its population structure with that of China. India has an annual rate of increase of 1.98% as against 2.3% in China (Mainland). It has a sex ratio of 941 as against 930 in China. It has a much higher density, two times higher, 138 per kilometre as against 68 in China. From these figures, it will be clear that India has got as fast a growth rate as China with much less living space and the population problem is more complex than in China. Compared with other countries of the world, India has a high rate of population growth. A higher growth has been recorded in Egypt (2.4), Canada (2.6), Mexico (3.1), Kenya (2.3), Venezuela (4.3), Ceylon (2.7), Thailand (4.3), China (Taiwan) (3.6) and Australia (2.2). Except China (Taiwan) and Ceylon they have recorded a much lower density than India which gives more living room to the growing population. India has 1/10th of the population of the world with 2% of the total area.

A similar statement is presented below for the major States in India.

TABLE IV-11

Comparing State's population, annual rate of increase, sex ratio and density per square kilometre with major States of India

India/State	1961 Census Population			Annual % rate of increase	Sex ratio	Density (population per sq. km. of area)
	Persons	Males	Females			
1	2	3	4	5	6	7
India	439,234,771	226,293,201	212,941,570	1.98	941	138
Andhra Pradesh	35,983,447	18,161,671	17,821,776	1.46	981	131
Assam	11,872,772	6,328,129	5,544,643	3.00	876	97
Bihar	46,455,610	23,301,449	23,154,161	1.82	994	268
Gujarat	20,633,350	10,633,902	9,999,448	2.41	940	112
Jammu & Kashmir	3,560,976	1,896,633	1,664,343	0.91	878	26
Kerala	16,903,715	8,361,927	8,541,788	2.24	1,022	435
Madhya Pradesh	32,372,408	16,578,204	15,794,204	2.19	953	74
Madras	33,686,953	16,910,978	16,775,975	1.13	992	259
Maharashtra	39,553,718	20,428,882	19,124,836	2.14	936	129
Mysore	23,586,772	12,040,923	11,545,849	1.97	959	123
Orissa	17,548,846	8,770,586	8,778,260	1.82	1,001	113
Punjab	20,306,812	10,891,576	9,415,236	2.33	864	166
Rajasthan	20,155,602	10,564,082	9,591,520	2.36	908	59
Uttar Pradesh	73,746,401	38,634,201	35,112,200	1.55	909	250
West Bengal	34,926,279	18,599,144	16,327,135	2.88	878	394

Madras has approximately 8% of the total population of India but its population is higher than many other countries in the world except U.S.A., Pakistan, Mexico, France, Federal Democratic Republic, United Kingdom, China and Japan. As such, demographic analysis of the pattern of population in the world context will be of adequate interest. The interest is perhaps enhanced by the fact that Madras State has recorded an annual increase of 1.13% as against 1.98% of India. Its rate of annual increase is much lower than many of the countries in the world. Its density, however, is higher than that of India—259 as against 138. No other country except China (Taiwan) has recorded such a high density as Madras except some other States in India. They are Kerala—435, West Bengal—394 and Bihar—268. Their rate of increase is higher than that of Madras the rate being 2.88% for West Bengal, 2.24% for Kerala and 1.82% for Bihar. Thus Madras represents one State in India which has got a stable population structure provided its rate of annual increase recorded during 1951-61 represents its true pattern of population growth and will remain unchanged during the decades to come.

Its sex ratio is much more stable being 992 as against 941 of India. It compares favourably with the sex ratios of many countries listed in the table.

Size of districts among the major States in India

11. Table IV - 12 gives the most populous district, the least populous district and average population of a district in 15 States of India in 1961.

TABLE IV-12

Most populous, least populous districts and average population of district in each of the States of India — 1961

State (in alphabetical order)	Most Populous District		Least Populous District		Average population of district
	Name	Population	Name	Population	
1	2	3	4	5	6
Andhra Pradesh	Guntur	3,009,900	Adilabad	1,009,292	1,799,172
Assam	Kamrup	2,062,572	Mizo Hills	266,063	1,079,343
Bihar	Darbhanga	4,413,027	Dhanbad	1,158,610	2,732,683
Gujarat	Surat	2,451,624	Dang	71,567	1,213,726
Jammu & Kashmir	Anantnag	654,368	Ladakh	88,651	395,664
Kerala	Kozhikode	2,617,189	Trichur	1,639,862	1,878,191
Madhya Pradesh	Bilaspur	2,021,793	Datia	200,467	752,847
Madras	Salem	3,804,108	Nilgiri	409,308	2,591,304
Maharashtra	Greater Bombay	4,152,056	Wardha	634,277	1,521,297
Mysore	Bangalore	2,504,462	Coorg	322,829	1,241,409
Orissa	Cuttack	3,060,320	Baudh-Khondmals	514,427	1,349,911
Punjab	Ferozepur	1,619,116	Lahaul and Spiti	20,453	1,068,780
Rajasthan	Jaipur	1,901,756	Jaisalmer	140,338	775,215
Uttar Pradesh	Meerut	2,712,960	Uttar Kashi	122,836	1,365,674
West Bengal	24-Parganas	6,280,915	Darjeeling	624,640	2,182,892

The following points will be of interest. West Bengal has the highest population for a district in India, 6,280,915 in 24-Parganas. The second district is Darbhanga in Bihar State with 4,413,027. The next biggest district is Greater Bombay in Maharashtra (4,152,056). In fact, it is only the City of Bombay with the surrounding areas added to it. The fourth district is in Madras, Salem with a population of 3,804,108. For the average population of districts, the first rank is held by Bihar with 27.33 lakhs followed by Madras with 25.91 lakhs.

Among the least populous districts in India, the first district is Trichur with 16.40 lakhs. Not much difference is generally found in the population of the 9 districts of Kerala State. The reason for this is that Kerala, which is itself small in area, has been divided into 9 districts more or less equal in area and population. This has been achieved by a series of changes in the district boundaries which took place between 1957-59, consequent on the formation of Kerala in which 4 new districts were formed more to fall in line with the conditions prevailing in the Travancore State in which small district was the normal pattern. Next place is held by Dhanbad district with 11.59 lakhs. Adilabad—10.09 lakhs (Andhra Pradesh), Wardha — 6.34 lakhs (Maharashtra) and Darjeeling — 6.25 lakhs (West Bengal) follows it. The last place is held by Lahaul and Spiti in Punjab with a population of 20,453 and Dang district of Gujarat (71,567). It will be readily seen that there is no uniform pattern followed in any other State in India in the formation of the districts which has depended in the past on considerations other than its size or its population.

Another table (Table IV-13) has been added showing the largest and smallest districts in area and average size of a district in 15 States in India.

TABLE IV-13

The largest, smallest districts and average size of districts in each of the main States of India

State (in alphabetical order)	Largest District		Smallest District		Average area of district in sq. miles
	Name	Area in sq. miles	Name	Area in sq. miles	
1	2	3	4	5	6
Andhra Pradesh	Kurnool	9,209	Hyderabad	2,997	5,303
Assam	Mizo Hills	8,143	Nowgong	2,200	4,296
Bihar	Ranchi	7,035	Dhanbad	1,109	3,937
Gujarat	Kutch	16,567	Dang	689	4,180
Jammu & Kashmir*	Ladakh	37,754	Kathua	1,024	5,963
Kerala	Kozhikode	2,570	Alleppey	708	1,667
Madhya Pradesh	Bastar	15,128	Datia	786	3,931
Madras	Salem	7,051	Madras	49	3,858
Maharashtra	Chanda	10,088	Greater Bombay	169	4,549
Mysore	Bijapur	6,567	Coorg	1,590	3,887
Orissa	Koraput	9,919	Balasore	2,507	4,629
Punjab	Kangra	6,293	Simla	222	2,490
Rajasthan	Jaisalmer	14,995	Dungarpur	1,460	5,073
Uttar Pradesh	Mirjapur	4,263	Rampur	917	2,109
West Bengal	24-Parganas	5,638	Calcutta	40	2,137

* Surveyor General's figures, as State Survey figures are not available
The area figures have been taken after rounding them to the nearest integer

Madras has an average area of 3,858 sq. miles for a district which is lower than that of Andhra Pradesh, Assam, Bihar, Jammu and Kashmir, *Gujarat, Madhya Pradesh, Maharashtra, Mysore,* Orissa, and Rajasthan and which is higher than that of Punjab, West Bengal, Uttar Pradesh and Kerala. *Thus, the comparative area of a district* is lower in Madras than in most of the States in India. A large area is found in Ladakh with 37,754 sq.miles. Gujarat stands next with 16,567 sq.miles and Madhya Pradesh is third with 15,128 sq. miles and Rajasthan fourth with 14,995 sq. miles. In the size of large districts, Madras has a comparatively low rank which is in keeping with the ranking in India in area (No.11). The smallest district in India is Calcutta with 40 sq. miles. Next is Madras with 49 sq. miles. No. 1 rank among the smallest districts is held by Hyderabad district of Andhra Pradesh with 2,997 sq. miles. A study of this table will show *that no uniform principle* is observed in forming districts from State to State.

Size range of districts in Madras

12. I will now discuss the comparative size range of the Madras districts. The first exception is of course the Madras City which has the lowest area of 49 sq. miles. It is actually limited to the Corporation of Madras and cannot even compare with Cities like Bombay and Delhi because for Census purposes, Bombay and Delhi include large tracts of non-urban areas surrounding the City. Actually even urban areas which are located in *juxtaposition with the City of Madras are not* included within the city limits for reasons unconnected with statistics or urbanisation. Considering the ranges of the area in Madras, the smallest districts are Kanyakumari and Nilgiri with 645 and 982 square miles. If they are excluded, we get a range from 7,051 of Salem to 3,155 of Chingleput. Coimbatore is in the range of 6,000 and Tiruchirapalli 5,500. Madurai (4,869) Ramanathapuram (4,829), North Arcot (4,690), Tirunelveli (4,408,) and South Arcot (4,208) fall within the range 4,000 to 5,000. Thanjavur is a slightly smaller district with 3,739 sq. miles. Chingleput is still smaller with 3,155 sq. miles. Thus it will be seen that with the exception of Madras City which is a Corporation and Kanyakumari which has an area of 645.5 sq. miles and Nilgiri with an area of 981.7 sq. miles, Madras districts have a range of 3,000 to 7,000 sq. miles. Nilgiri has continued to be a small district because of the peculiar hill tract which it covers and because of *the location of summer headquarters of the State* Government during the days of British. It is also not possible to add this to any other district. As such there is justification for retaining the Nilgiri district as a separate unit. The role of Kanyakumari is quite different. It represents an area transferred from Kerala to Madras State as a result of the linguistic reorganisation based on the principle of language. It was difficult to attach it to Tirunelveli district which itself has a large area and a still larger population and for sentimental reasons it was necessary to treat it as a separate unit and give due importance by having a separate district. Madras City, as already indicated, is confined to the limits of the Corporation of Madras and has a separate system of administration, *quite distinct from other districts of* the State. With these three exceptions, the Madras districts are fairly big sized. The bigger districts are no doubt Coimbatore and Salem which have areas of about 6,000 sq. miles and 7,000 sq. miles respectively. Actually Coimbatore and Salem have also recorded a higher population *among the districts in the State,* Salem being the first with a population of 3,804,108.

Districts above or below the average in population and area

13. The tables below give the districts classified *according as they are above or below the* average of district in population and area in the major States in India.

The average population of a Madras district is 26 lakhs. The only State which has a higher average is Bihar. Bihar has 17 districts in which 9 districts have more than the district average and 8 less than the district average. Six districts fall within 20% range of the average population. In Madras, 8 districts have more than the average size. Out of these, *only 2 districts are above the district average* by less than 20%. From the figures it will be seen that the distribution is balanced in Andhra Pradesh, Bihar and Mysore. Madras is one State which has a higher figure in districts of more than the average size in terms of area. Bihar has also a higher figure, but it is 9 against 8. In Madras it is 8 against 5. In other States like Jammu and

TABLE IV-14

Number of districts and their total populations which are above or below the average population of district for each State, 1961

State (in alphabetical order)	No. of districts in the State which are above the average population of district for the State	Population comprised in districts mentioned in col. 2	No. of districts in the state which are below the average population of district for the State	Total population comprised in districts mentioned in col. 4	No. of districts which are within 20% (±) of the average population of district for the State	Total population comprised in districts mentioned in col.6
1	2	3	4	5	6	7
1 Andhra Pradesh	10	22,225,178	10	13,758,269	11	20,075,312
2 Assam	7	10,557,603	4	1,315,169	2	2,500,431
3 Bihar	9	31,414,419	8	15,041,191	6	17,334,716
4 Gujarat	7	12,571,241	10	8,062,109	4	4,569,741
5 Jammu & Kashmir	4	2,416,370	5	1,144,606	1	326,061
6 Kerala	2	4,558,417	7	12,345,298	8	14,286,526
7 Madhya Pradesh	16	17,701,448	27	14,670,960	17	12,321,601
8 Madras	8	25,933,389	5	7,753,564	4	10,396,452
9 Maharashtra	10	20,484,032	16	19,069,686	13	19,064,184
10 Mysore	9	15,391,052	10	8,195,720	6	7,269,550
11 Orissa	6	11,221,169	7	6,327,677	4	5,626,923
12 Punjab	10	14,105,092	9	6,201,720	8	8,878,552
13 Rajasthan	13	13,724,250	13	6,431,352	9	6,964,404
14 Uttar Pradesh	24	46,101,676	30	27,644,725	24	32,670,154
15 West Bengal	6	21,154,333	10	13,771,946	3	6,559,905

TABLE IV-15

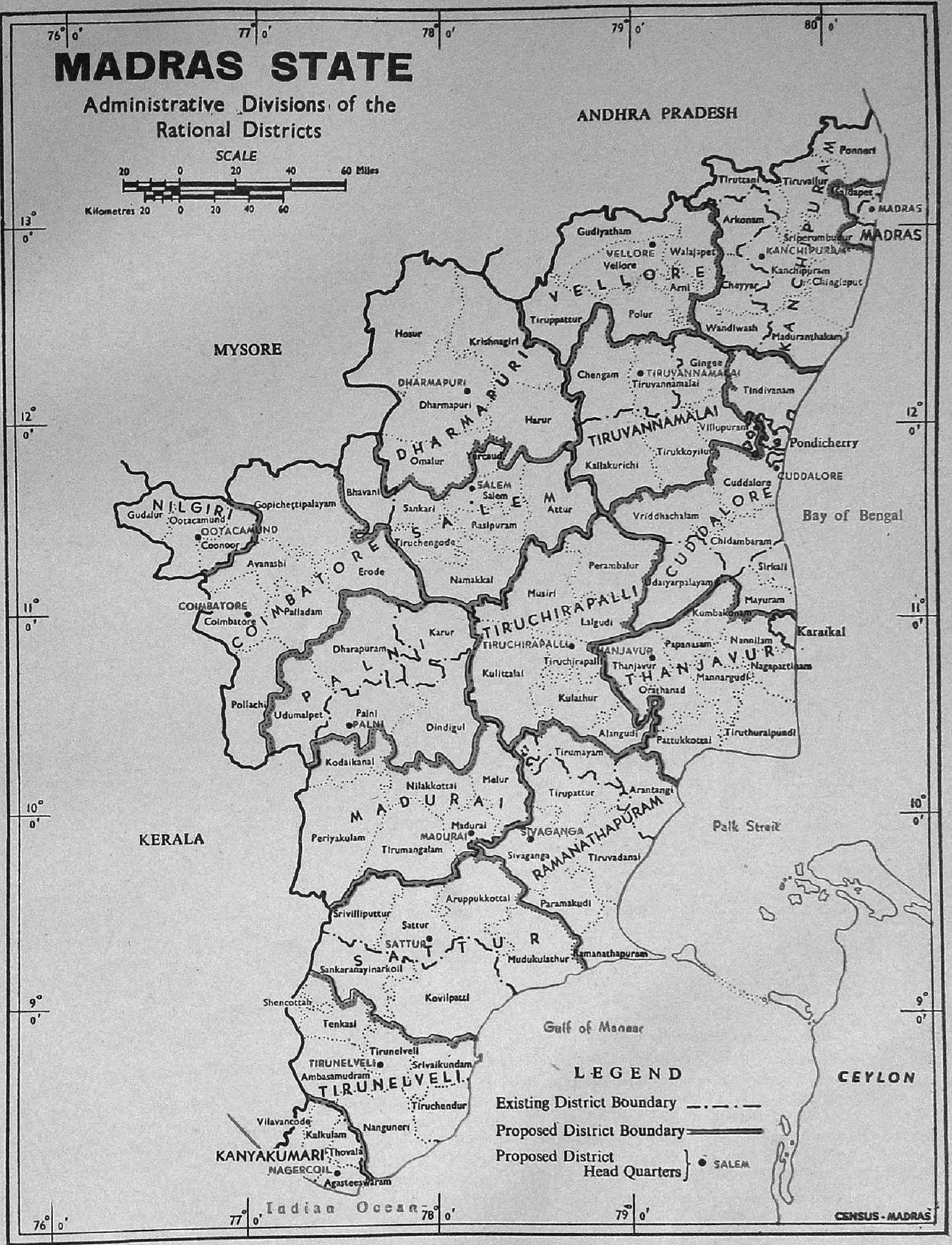
Number of districts and their total areas which are above or below the average area of district for each State together with their respective populations, 1961

	State (in alphabetical order)	No. of districts in the State which are above the average area of district for the State	Total area comprised in districts mentioned in col. 2	Proportion of the population living in these districts to the population of the State	No. of districts in the State which are below the average area of district for the State	Total area comprised in districts mentioned in col. 5	Proportion of the population living in these districts to the population of the State	No. of districts which are within 20% (+) of average area of district for the State	Total area comprised in districts mentioned in col.8	Proportion of the population living in these districts to the population of the State
	1	2	3	4	5	6	7	8	9	10
1	Andhra Pradesh	10	67,100	47.82	10	38,953	52.18	9	50,135	42.70
2	Assam	4	24,592	21.66	7	22,665	78.34	4	16,278	56 25
3	Bihar	9	46,877	51.21	8	20,059	48 79	5	19,444	36 84
4	Gujarat	4	30,362	25.94	13	40,694	74.06	10	39,917	67.28
5	Jammu & Kashmir*	1	37,754	2.49	8	15,911	97.51	...	...	...
6	Kerala	5	11,024	58.26	4	3,979	41.74	2	3,807	21.99
7	Madhya Pradesh	15	91,977	47.74	28	77,065	52.26	18	68,642	39.25
8	Madras	8	41,584	74.54	5	8,570	25.46	4	15,509	33.31
9	Maharashtra	12	70,965	47.84	14	47,315	52.16	12	52,910	39.83
10	Mysore	10	49,526	59.08	9	24,320	40.92	9	34,088	51.36
11	Orissa	4	26,466	33.56	9	33,706	66.44	8	34,353	64.47
12	Punjab	7	28,007	40.44	12	19,298	59.56	5	11,862	31.14
13	Rajasthan	9	78,659	40.28	17	53,231	59.72	5	23,078	25.04
14	Uttar Pradesh+	19	51,360	47.14	29	47,069	52.86	28	54,580	61.17
15	West Bengal	6	21,033	51.79	10	13,161	48.21	5	10,667	22.27

* Surveyor General figures as State Survey figures are not available

+Area figures of the State Survey Office of the districts of Uttar Kashi, Chamoli, Pithoragarh, Tehri-Garhwal, Garhwal and Almora are not available separately as these districts have been carved out in the inter censal period. Uttar Kashi and Tehri-Garhwal are formed from the former district of Tehri-Garhwal, Garhwal and Chamoli districts from the former Garhwal district, and Almora and Pithoragarh from the former district of Almora. The State Survey area figures are available only for the former districts of Tehri-Garhwal, Garhwal and Almora, which are 4,500 sq. miles, 5,619.2 sq. miles and 5,330.7 sq. miles *respectively. We have excluded the figures of those districts and have* taken the figures of the remaining 48 districts for the preparation of this Inset Table.

The area figures have been taken after rounding them to the nearest integer



MADRAS STATE
Administrative Divisions of the Rational Districts
SCALE
20 0 20 40 60 Miles
Kilometres 20 0 20 40 60
ANDHRA PRADESH
MYSORE
KERALA
Bay of Bengal
Palk Strait
Gulf of Manaar
Indian Ocean
CEYLON
Pondicherry
Karaikal
MADRAS
KANCHIPURAM
VELLORE
DHARMAPURI
TIRUVANNAMALAI
NILGIRI
SALEM
CUDDALORE
COIMBATORE
TIRUCHIRAPALLI
THANJAVUR
PALNI
MADURAI
RAMANATHAPURAM
SATTUR
TIRUNELVELI
KANYAKUMARI
LEGEND
Existing District Boundary
Proposed District Boundary
Proposed District Head Quarters
SALEM
CENSUS-MADRAS

Kashmir, some lopsidedness is observed, in that the figure is 1 in more than the average size as against 8 in less than the average size. In no reorganisation of the districts can the disappearance of Nilgiri, Kanyakumari and Madras be contemplated. What is now proposed by the Government of Madras is to leave Chingleput also and divide the other districts and form 9 more districts out of them.

Scheme for formation of rational districts

14. A study of the table will show that no proper balance has been maintained between area and population. There is also overlapping of the headquarters with the result that a proper co-ordinated development cannot take place. I have indicated below another scheme under which it will be possible to divide Madras into 17 districts. A statement illustrating this division is given below with a map attached. Under this scheme, the Saidapet taluk and parts of Sriperumbudur will be added to the Corporation of Madras to form Greater Madras as has been done in Bombay and Delhi. The constitution of a separate district will facilitate the development of metropolitan areas. The other two districts to be left untouched are Nilgiri and Kanyakumari. The remaining 10 districts will be reorganised to form 14 districts. 5 more districts will be formed with headquarters at Sattur, Sivaganga, Palni, Tiruvannamalai and Dharmapuri. Under this scheme, the areas which will form the most backward parts of Madras State will form new districts which will facilitate their integrated development. These areas are the northern parts of Salem, northern parts of Tirunelveli, western parts of Ramanathapuram, eastern parts of Ramanathapuram with parts of Tiruchirapalli and Thanjavur and northern parts of Tiruchirapalli.

TABLE IV-16

Area and population of rational districts

District and Taluk	Population	Area in sq. miles
1	2	3
Madras District		
Madras	1,729,141	48.9
Saidapet	393,886	227.2
	2,123,027	**276.1**
Kanchipuram District		
Kanchipuram	322,067	411.9
Chingleput	246,077	435.7
Sriperumbudur	235,727	305.9
Tiruvallur	270,414	414.4
Ponneri	230,800	514.5
Arkonam	253,524	327.2
Cheyyar	209,856	327.3
Maduranthakam	283,627	530.6
Wandiwash	221,297	339.3
Tiruttani	213,814	314.9
	2,487,203	**3,921.7**
Vellore District		
Vellore	409,473	432.2
Walajapet	362,158	395.0
Gudiyatham	385,228	510.0
Arni	169,839	175.7
Polur	245,792	567.7
Tiruppattur	407,584	589.1
	1,980,074	**2,669.7**
Tiruvannamalai District		
Tiruvannamalai	258,872	374.6
Chengam	222,703	652.3
Kallakurichi	383,478	873.4
Tirukkoyilur	400,111	584.3
Villupuram	356,612	351.6
Gingee	254,443	409.7
	1,876,219	**3,245.9**
Cuddalore District		
Cuddalore	513,050	448.0
Vriddhachalam	353,466	575.8
Udaiyarpalayam	437,692	748.9
Chidambaram	433,997	403.8
Sirkali	185,778	170.6
Mayuram	364,059	282.5
Tindivanam	352,816	561.5
	2,640,858	**3,191.1**
Salem District		
Salem	616,613	376.6
Namakkal	420,228	682.5
Tiruchengode	246,667	325.9
Sankari	242,311	276.9
Bhavani	252,500	572.4
Yercaud	23,753	148.0
Rasipuram	200,689	315.6
Attur	296,511	650.9
	2,299,272	**3,348.8**
Dharmapuri District		
Dharmapuri	374,581	946.8
Omalur	425,085	557.2

District and Taluk 1	Population 2	Area in sq. miles 3
Harur	215,603	712.0
Krishnagiri	416,713	891.9
Hosur	325,354	1,166.9
	1,757,336	**4,274.8**
Coimbatore District		
Coimbatore	730,374	528.4
Gopichettipalayam	402,223	1,128.6
Avanashi	295,701	493.2
Erode	511,510	599.4
Palladam	391,054	585.2
Pollachi	427,084	708.8
	2,757,946	**4,043.6**
Palni District		
Palni	288,809	624.9
Udumalpet	220,679	554.9
Dharapuram	326,346	853.7
Karur	345,162	610.4
Dindigul	602,547	893.7
	1,783,543	**3,537.6**
Tiruchirapalli District		
Tiruchirapalli	502,740	269.4
Musiri	383,720	675.3
Lalgudi	266,232	373.0
Perambalur	286,739	678.5
Kulittalai	445,355	923.9
Kulathur	169,300	512.4
Alangudi	190,479	347.0
	2,244,565	**3,779.5**
Thanjavur District		
Thanjavur	361,650	361.4
Papanasam	232,901	228.1
Kumbakonam	367,868	211.8
Nannilam	267,017	290.7
Mannargudi	271,828	301.5
Nagapattinam	279,309	240.0
Tiruthuraipundi	274,822	496.2
Pattukkottai	290,303	406.7
Orathanad	194,424	348.2
	2,540,122	**2,884.6**
Ramanathapuram District		
Ramanathapuram	192,228	334.2
Arantangi	155,968	401.3
Tirupattur	313,095	567.5
Sivaganga	266,538	657.3
Tiruvadanai	217,873	548.0
Paramakudi	225,643	439.9
Tirumayam	162,659	366.4
	1,534,004	**3,314.6**

District and Taluk 1	Population 2	Area in sq. miles 3
Madurai District		
Madurai	670,650	268.0
Melur	242,520	484.3
Nilakkottai	291,006	410.4
Kodaikanal	50,710	360.4
Periyakulam	654,303	1,106.0
Tirumangalam	410,682	721.2
	2,319,871	**3,350.3**
Sattur District		
Sattur	353,852	578.5
Mudukulathur	234,123	643.6
Aruppukkottai	269,306	617.7
Srivilliputtur	349,130	441.9
Sankaranayinarkoil	335,928	634.8
Kovilpatti	413,090	1,086.2
	1,955,429	**4,002.7**
Tirunelveli District		
Tirunelveli	338,015	325.2
Shencottah	66,473	70.2
Tenkasi	335,570	402.8
Ambasamudram	293,586	498.1
Nanguneri	325,006	704.9
Tiruchendur	291,591	323.2
Srivaikuntam	331,020	362.1
	1,981,261	**2,686.5**
Nilgiri District	**409,308**	**981.7**
Kanyakumari District	**996,915**	**645.5**

Abstract

District 1	Population 2	Area in sq. miles 3
Madras	2,123,027	276.1
Kanchipuram	2,487,203	3,921.7
Vellore	1,980,074	2,669.7
Tiruvannamalai	1,876,219	3,245.9
Cuddalore	2,640,858	3,191.1
Salem	2,299,272	3,348.8
Dharmapuri	1,757,336	4,274.8
Coimbatore	2,757,946	4,043.6
Palni	1,783,543	3,537.6
Tiruchirapalli	2,244,565	3,779.5
Thanjavur	2,540,122	2,884.6
Ramanathapuram	1,534,004	3,314.6
Madurai	2,319,871	3,350.3
Sattur	1,955,429	4,002.7
Tirunelveli	1,981,261	2,686.5
Nilgiri	409,308	981.7
Kanyakumari	996,915	645.5

Distribution of population of among villages and towns

15. Table IV-17 gives the persons per 10,000 of population living in villages and towns of selected population sizes for the major states in India.

size range of 5,000 and above which is a peculiar feature of Kerala not seen in any other State. Madras has 1,306 persons, in that village size and is followed by Andhra Pradesh with 904. Larger sized villages seem to be a common feature of the Southern States of Madras and

TABLE IV-17

Persons per 10,000 of population in villages and towns of selected population sizes

State (in alphabetical order)	Total 10,000	(a) Villages with population				(b) Towns & Town-groups of Classes III to VI	(c) Towns & Town-groups of Class II	(d) Cities & Town-roups of Class I
		Less than 200	200—999	1,000—4,999	Over 5,000			
1	2	3	4	5	6	7	8	9
1 Andhra Pradesh	10,000	145	1,646	5,561	904	852	148	744
2 Assam	10,000	878	5,150	3,140	63	549	49	171
3 Bihar	10,000	473	3,592	4,353	740	371	108	363
4 Gujarat	10,000	176	2,723	4,052	473	1,155	301	1,120
5 Jammu & Kashmir	10,000	688	4,724	2,827	95	549	...	1,117
6 Kerala	10,000	...	9	926	7,554	744	174	593
7 Madhya Pradesh	10,000	858	5,431	2,231	51	754	117	558
8 Madras	10,000	24	855	5,147	1,306	1,134	431	1,103
9 Maharashtra	10,000	177	2,747	3,657	597	795	194	1,833
10 Mysore	10,000	275	3,150	3,877	465	1,031	281	921
11 Orissa	10,000	1,141	5,600	2,576	51	419	130	83
12 Punjab	10,000	226	2,871	4,372	517	979	437	598
13 Rajasthan	10,000	554	4,134	3,386	298	892	120	616
14 Uttar Pradesh	10,000	457	4,151	3,795	311	435	151	700
15 West Bengal	10,000	311	2,870	3,831	542	628	435	1,383

In Madras State 5,147 persons live in villages of the size range 1,000-4,999. The only State which has a higher population in the size range is Andhra Pradesh with 5,561. Madhya Pradesh and Orissa have a preference for the villages of 200-999. Kerala has a preference for the Andhra Pradesh while small sized villages seem to be the feature of backward States like Orissa, Madhya Pradesh and Assam. Higher is the degree of industrialisation, greater is the tendency for small villages to disappear, forming larger units. In the group-cities and Class I towns, the highest

population has been recorded in Maharashtra with 1,833. The next highest proportion is in West Bengal with 1,383. These high figures are to a large extent due to the abnormally high proportions of population recorded in the cities of Calcutta and Bombay and, therefore, do not represent a more balanced urban pattern. Madras has 1,103 persons living in cities and town-groups of Class I. Surprisingly enough, Gujarat and Jammu and Kashmir have higher figures of 1,120 and 1,117 respectively. But when we take into consideration the total population living in the towns, Madras will be slightly ahead of Gujarat and much ahead of Jammu and Kashmir. Lower urban figures are recorded in States like Assam, Bihar, Orissa and Uttar Pradesh. Even among the towns and town-groups, no balanced distribution can be seen. In the towns and town-groups of Class II, Punjab is ahead with 437 followed by West Bengal with 435. Madras records 431. Generally location of small scale industries has a tendency to increase the population range of Class II towns. A perusal of the Table will show that no balanced distribution of population among towns and villages can be found in any part of India. Large variations are seen from State to State depending on the progress of urbanisation and the location of industries. The general trend of the South Indian States is for the small units to disappear giving place to medium size units. The States of Maharashtra, Gujarat and West Bengal have got a preponderance of large cities leaving the rural parts more rural than it should be. In Kerala the pattern is one in which the normal type of the villages found in other parts of India cannot be seen.

Distribution of towns and villages by size

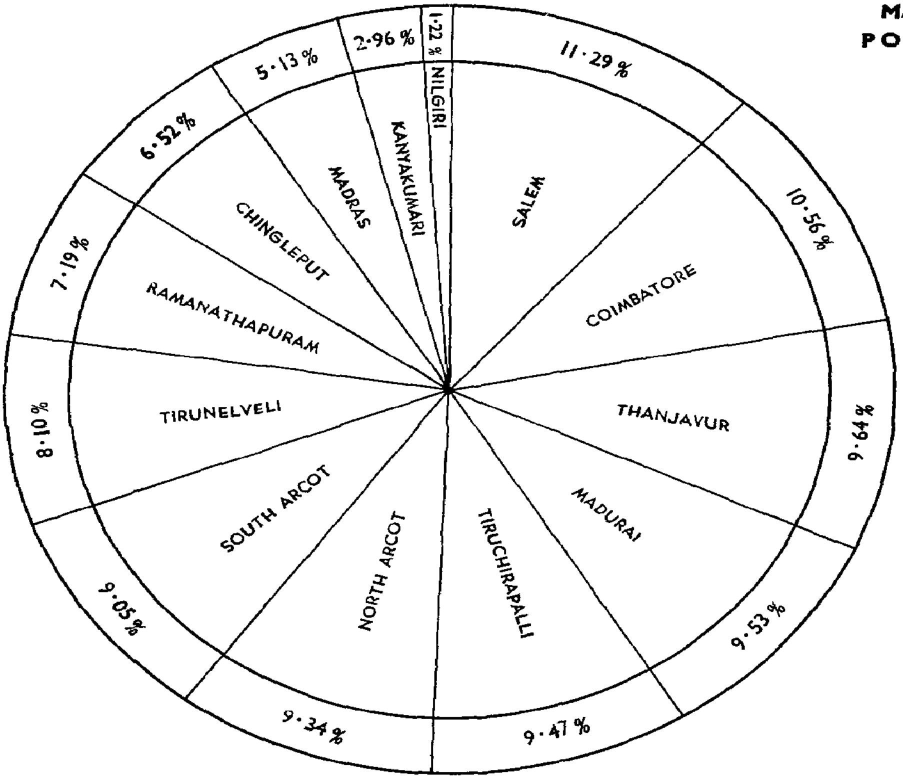
16. Table IV-18 gives the percentage of villages among all villages and towns among all towns by size in different States of India.

TABLE IV-18

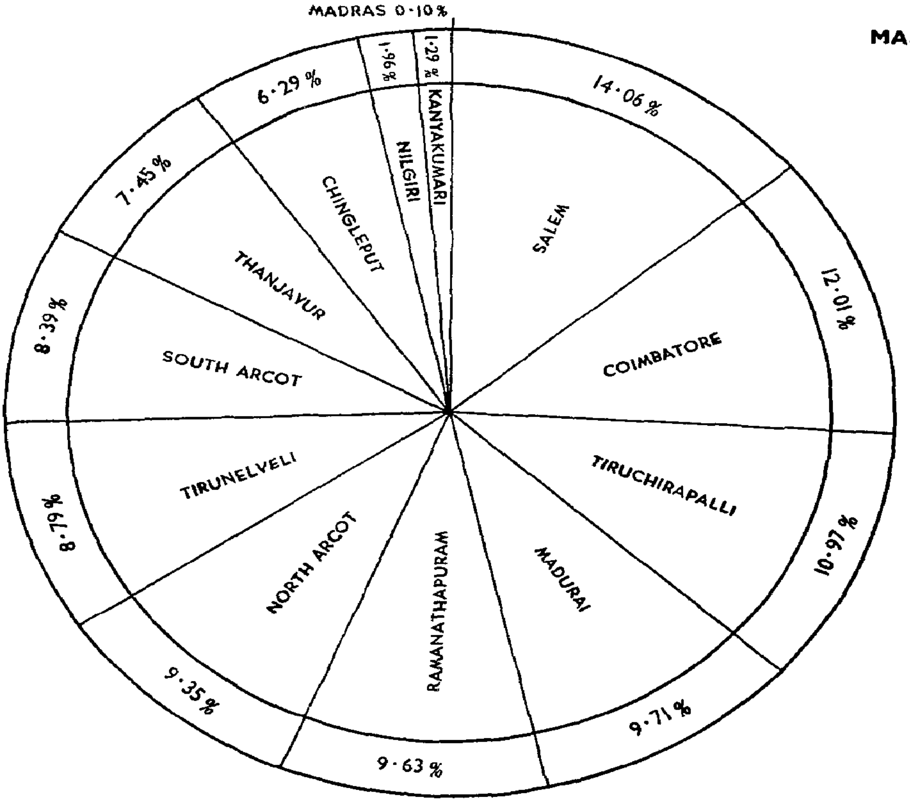
Percent of villages and towns among all villages and towns (including cities and town-groups respectively of selected population sizes)

	State (in alphabetical order)	VILLAGES: Total 100	Villages with less than 200	Villages with 200–999	Villages with 1,000–4,999	Over 5,000	TOWNS: Total 100	Towns & Town-groups of Classes III–VI	Towns & Town-groups of Class II	Cities & Town-groups of Class I
	1	2	3	4	5	6	7	8	9	10
1	Andhra Pradesh	100	22	39	37	2	100	91	4	5
2	Assam	100	41	50	9	...	100	95	2	3
3	Bihar	100	31	52	16	1	100	87	6	7
4	Gujarat	100	17	57	25	1	100	91	6	3
5	Jammu & Kashmir	100	35	55	10	...	100	95	...	5
6	Kerala	100	...	1	29	70	100	90	5	5
7	Madhya Pradesh	100	37	56	7	...	100	94	2	4
8	Madras	100	5	32	59	4	100	88	8	4
9	Maharashtra	100	19	57	23	1	100	90	5	5
10	Mysore	100	23	57	19	1	100	93	4	3
11	Orissa	100	46	48	6	...	100	93	5	2
12	Punjab	100	23	53	23	1	100	90	7	3
13	Rajasthan	100	32	56	12	...	100	93	3	4
14	Uttar Pradesh	100	29	56	15	...	100	86	7	7
15	West Bengal	100	27	53	19	1	100	77	16	7

MADRAS 1961
POPULATION



MADRAS 1961
AREA



It confirms the observation I have recorded earlier. Madras has 59% of all villages in the size range of 1,000-4,999. Kerala has 70% of all villages in the size range over 5,000. Andhra Pradesh has 37% of all villages in the size range of 1,000-4,999 and 39% in the size range of 200-999 as against 59 and 32 of Madras. The Southern States show a pattern quite different from North Indian States where more villages are found in the lower group. Among towns, a more balanced pattern is seen from State to State, the only sharp variation being in West Bengal where a preference is shown for Class II towns and Class I towns. West Bengal has actually 16% of all towns as Class II towns, the next highest being Madras with 8. West Bengal has also 7% of all towns as Class I towns. It shows that owing to the industrialisation in West Bengal, there is a tendency for small towns to develop further and move into the higher category. The villages do not develop at the same rate and become towns. This is highlighted by the fact that West Bengal has only one per cent of all villages in size range over 5,000 and 19% of all villages in the group 1,000-4,999, but has 80% of all villages in the group of less than 1,000 population.

Ranking of districts in population and area

17. Table IV-19 gives the ranking of districts within the State in terms of population and area in 1961 and 1951.

TABLE IV-19

Ranking of districts in population and area

Rank in population 1961	Name of District	Percent of State's population in 1961	Percent of State's area in 1961	Rank in area in 1961	Rank in population 1951
1	2	3	4	5	6
1	Salem	11.29	14.06	1	1
2	Coimbatore	10 56	12.01	2	2
3	Thanjavur	9.64	7.45	9	3
4	Madurai	9.53	9.71	4	6
5	Tiruchirapalli	9.47	10.97	3	4
6	North Arcot	9.34	9.35	6	5
7	South Arcot	9.05	8.39	8	7
8	Tirunelveli	8.10	8.79	7	8
9	Ramanathapuram	7.19	9.63	5	9
10	Chingleput	6.52	6.29	10	10
11	Madras	5.13	0 10	13	11
12	Kanyakumari	2.96	1.29	12	12
13	Nilgiri	1.22	1.90	11	13

The following points are of interest. The ranking in population has remained undisturbed except that Madurai has gone ahead of Tiruchirapalli and North Arcot during 1951-61. It has a greater population than Tiruchirapalli and North Arcot. It is due to the fact that the population increase of Madurai is much higher than those of Tiruchirapalli and North Arcot. This will be discussed later. No other change in the population ranks has taken place.

Population increase during 1901-61

18. The table below gives the decade percentage change (1901-61) for the districts in the order of their rank in population in 1961.

TABLE IV-20

Percentage change in population 1961—1901

Rank in population in 1961	Name of District	Percentage Change 1901—1961	1961—1951	1951—1941	1941—1931	1931—1921	1921—1911	1911—1901
1	2	3	4	5	6	7	8	9
1	Salem	91.84	12.85	17.69	17.93	13.97	3.41	3.92
2	Coimbatore	92.88	12.78	17.21	15.01	11.38	6.31	7.14
3	Thanjavur	44.39	8.82	16.36	7.44	2.40	(—)1.53	5.25
4	Madurai	88.95	11.05	16.89	13.22	9.43	4.15	12.81
5	Tiruchirapalli	54.48	8.36	13.48	12.11	(—)0.67	4.05	8.42
6	North Arcot	82.70	8.51	10.95	13.69	13.21	5.05	12.24
7	South Arcot	44.74	9.77	6.44	6.28	5.79	(—)1.80	12.19
8	Tirunelveli	61.76	8.99	9.52	9.80	7.29	6.42	8.10
9	Ramanathapuram	57.88	16.33	4.52	7.62	7.02	3.27	9.17
10	Chingleput	64.16	12.17	8.11	10.00	9.30	5.15	7.09
11	Madras	212.74	22.11	60.64	20.17	24.01	2.81	4.07
12	Kanyakumari	177.50	20.64	22.07	16.35	17.75	17.02	17.54
13	Nilgiri	262.60	31.30	48.65	23.85	33.84	6.66	5.08

The most spectacular district is Nilgiri which has recorded an increase of 262.60% during the period 1901-61. The next is Madras City which has recorded a remarkable increase of population of 212.74% during the same period. The growth of Nilgiri is due to the migration of persons seeking work to this district. Actually it had a very low population in 1901. Madras City has grown remarkably during the decade 1941-51. The growth in decades 1931-41, 1951-61 and 1921-31 has been steady. Kanyakumari district has shown a steady increase, recording a percentage increase of 177 50 during 1901-61. Throughout these decades, the growth has been continuous more or less reflecting the conditions present in Kerala where a steady population increase has been the feature of this century. Coimbatore, Madurai, North Arcot and Salem have shown a normal pattern of growth. A lower growth has been recorded by South Arcot (44.74%), which shows the backwardness of the district which has compelled its people to migrate in search of work. Surprisingly enough, Thanjavur has the lowest rate of growth, 44.39%. The same trend is shown by Tiruchirapalli and South Arcot which are located in the deltaic area of Madras State. It follows that this area has reached the saturation point in cultivation and without proper industries developing, it cannot support a larger population. Again the impact of education has been felt to the maximum in Thanjavur and Tiruchirapalli districts and a large number of its residents have gone out in search of work to other parts of the State and outside the State. Chingleput, Tirunelveli and Ramanathapuram fall in another category. Chingleput has been benefited by the impact of Madras City. Tirunelveli has always maintained a steady rate of increase as its economy is sustained by agriculture plus cottage industries. In the past, Ramanathapuram district has depended on Ceylon and other countries outside India for its subsistence. It also used to send out its labourers in search of work to other districts like Thanjavur. As such the growth in 1941-51 has been very low (4.52%) and in no decade did it record the normal growth of 10%. But in 1951-61 the conditions have changed in that agriculture has become more remunerative and people have begun to think in terms of settling down in the district and take to agriculture or industry. This is the pattern of the growth rate in Madras. The districts which fall within the normal pattern are Salem, Coimbatore, Madurai, Tirunelveli and Chingleput. An exceptional growth has been recorded by Madras, Kanyakumari and Nilgiri.

Table IV-21 gives the districts which had a higher percentage of increase than the average for the State during 1901-1961.

TABLE IV - 21

Districts which have had a higher percent increase than the average for the State 1901—1961

Name of District	Percent increase		
	1901-1961	1921-61	1951-1961
1	2	3	4
Average for the State	74.97	55.75	11.85
Madras	212.74	192.31	22.11
North Arcot	82.70	54.94	8.51
Salem	91.84	78.51	12.85
Coimbatore	92.88	69.34	12.78
Nilgiri	262.60	223 52	31.30
Madurai	88.95	60.82	11.05
Kanyakumari	177.50	101.75	20.64

The districts are Madras, North Arcot, Salem, Coimbatore, Nilgiri, Madurai and Kanyakumari.

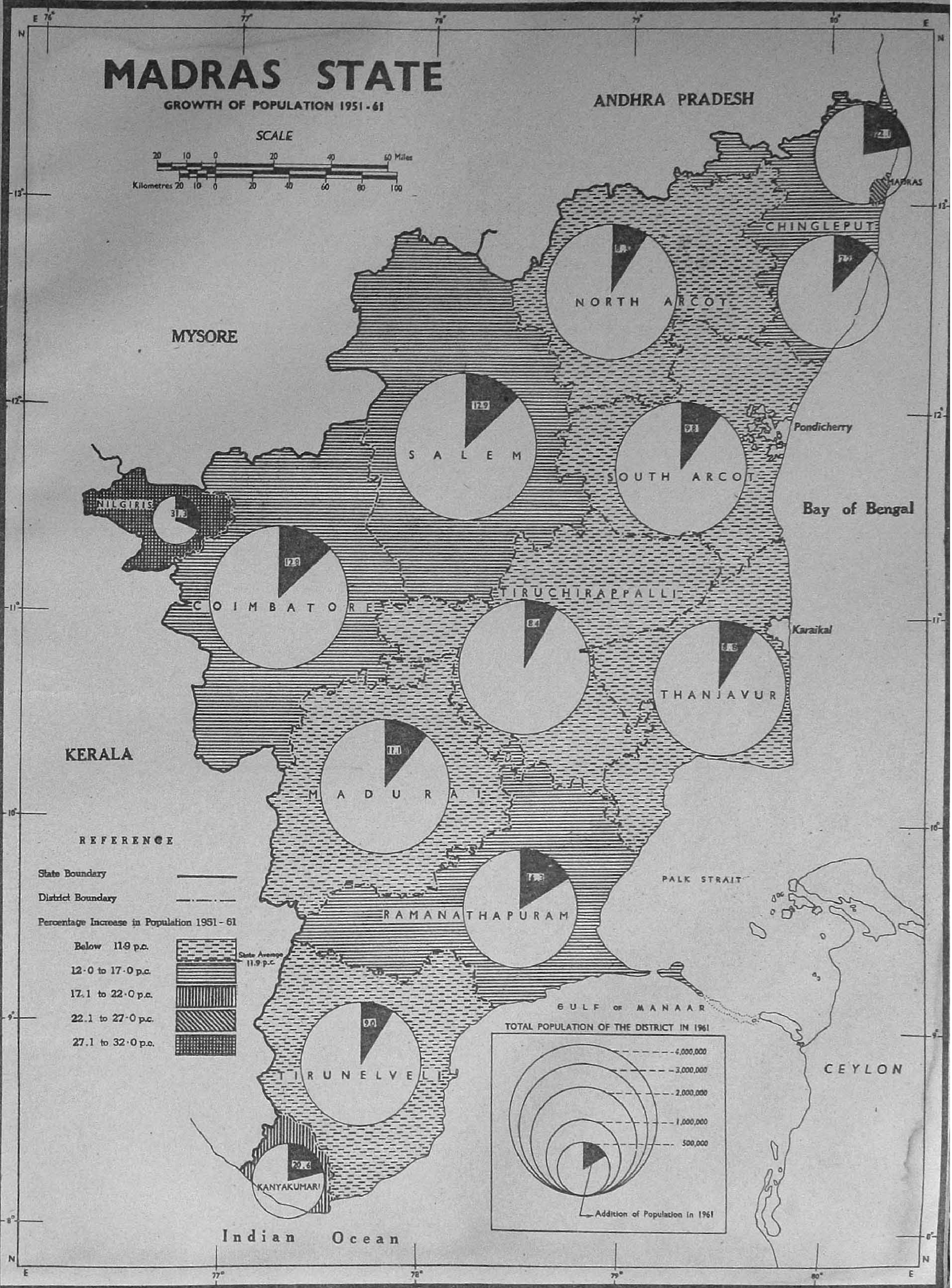
Table IV-22 gives the districts with a lower percentage increase than the average for the State.

TABLE IV-22

Districts which have had a lower percent increase than the average for the State 1901—1961

Name of District	Percent increase		
	1901-61	1921-61	1951-61
1	2	3	4
Average for the State	74.97	55.75	11.85
Chingleput	64.16	45.79	12.17
South Arcot	44.74	31.37	9.77
Tiruchirapalli	54.48	36.94	8.36
Thanjavur	44.39	39.31	8.82
Ramanathapuram	57.88	40.04	16.33
Tirunelveli	61.76	40.61	8.99

They are Chingleput, South Arcot, Tiruchirapalli, Thanjavur, Ramanathapuram and Tirunelveli.



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It is interesting to observe that the eastern sector of the State has a lower growth rate than the western. The eastern sector has seen the glory of the early days of Madras State and has progressed appreciably during the early days of British administration in India. But in the 20th century, these districts have shown signs of decadence compared with the western sector where there is more industrial activity. Again the eastern sector has depended on natural resources for sustaining its agriculture while in the western sector more effort has been expended in improving the agriculture by applying fertilizers and by baling out water. The State, therefore, has two regions - east and west—which shows distinct features of population growth, the exceptions being Madras City and Kanyakumari district. The growth of population in Kanyakumari district is not due to any specific industrial activity. It was part of the Kerala State which has a high rate of increase throughout the 20th century Ethnically the people have some affinities with Keralites with the result that the population increase noticed in that area does not represent a corresponding industrial prosperity.

Districts arranged according to area and population

19. *Two tables are given below, arranging the* districts by population and area above and below the average population and area of a district

TABLE IV-23

Districts arranged according as their populations are above or below the average population of a district for the State

(Average population of a district—2,591,304)

Name of District above average	Population	Name of District below average	Population
1	2	3	4
North Arcot	3,146,326	Madras	1,729,141
South Arcot	3,047,973	Chingleput	2,196,412
Salem	3,804,108	Nilgiri	409,308
Coimbatore	3,557,471	Ramanathapuram	2,421,788
Madurai	3,211,227	Kanyakumari	996,915
Tiruchirapalli	3,190,078		
Thanjavur	3,245,927		
Tirunelveli	2,730,279		

TABLE IV-24

Districts arranged according as their areas are above or below the average area of district for the State

(Average area of a district — 3,858.06 sq. miles)

Name of District above average	Area in sq. miles (according to State Director of Surveys)	Name of District below average	Area in sq. miles (according to State Director of Surveys)
1	2	3	4
North Arcot	4,690.40	Madras	48.93
South Arcot	4,208.06	Chingleput	3,155.10
Salem	7,051.22	Nilgiri	981.66
Coimbatore	6,024.62	Thanjavur	3,739.02
Madurai	4,868.89	Kanyakumari	645.50
Tiruchirapalli	5,505.17		
Ramanathapuram	4,828.63		
Tirunelveli	4,407.53		

No regular pattern can be seen. The reason is obvious. The districts have not been formed on the basis of any principle enunciated and applied on a uniform basis. They have grown as landmarks of British conquest of South India. Not much effort has been made by the administrators to distribute it on the basis of area and population with a view to bring about an integrated development of the area. The concern of a British administrator was chiefly to maintain law and order and to collect the revenue needed for running the Government. For this purpose, it was not necessary to redistribute the districts unless it became unmanageable by its size or population.

Distribution of population by taluks

20. I give below a table showing the taluks distributed according as they are above or below the average population of a taluk for a district.

The State excluding Madras City has 103 taluks of which 52 have population above the average and 51 below the average. It suggests the balanced distribution of taluks. Out of this, 46 taluks have a population range 20% below or above that of the average. It means that there is considerable scope to distribute the population on a more equitable basis. From district to district, Salem has a balanced distribution of taluks. So also Madurai and Tiruchirapalli. The distribution of taluks in Tirunelveli is unbalanced with 6 above average and 3 below average. So is the case in Kanyakumari with 3 and 1. Chingleput and North Arcot have taluks with less than average in larger numbers. Lopsideness of the distribution will be seen if we examine the figures in column 7.7 out of 9 taluks of Tirunelveli have unbalanced population. 6 out of 9 in Ramanathapuram, 6 out of 12 in Thanjavur, 4 out of 9 in Coimbatore, 6 out of 8 in

TABLE IV-25

Number of taluks and their total populations which are above or below the average population of taluks for their respective districts, 1961

	District	Total No of *taluks*	No. of taluks in the district which are above the average population of taluk for the district	Total population comprised in taluks mentioned in col. 3	No. of taluks in the district which are below the average population of taluk for the district	Total population comprised in taluks mentioned in col. 5	No. of taluks which are within 20% (±) of the average population of taluk for the district	Total population comprised in taluks mentioned in col. 7
	1	2	3	4	5	6	7	8
1	Chingleput	8	3	999,580	5	1,196,832	6	1,588,712
2	North Arcot	11	4	1,564,443	7	1,581,883	3	758,188
3	South Arcot	8	4	1,730,636	4	1,317,337	6	2,280,480
4	Salem	12	6	2,578,574	6	1,225,534	3	996,446
5	Coimbatore	9	4	2,071,191	5	1,486,280	4	1,546,707
6	Nilgiri	3	2	343,251	1	66,057	...	...
7	Madurai	8	4	2,338,182	4	873,045	1	410,682
8	Tiruchirapalli	10	5	2,114,669	5	1,075,409	3	898,133
9	Thanjavur	12	7	2,209,839	5	1,036,088	6	1,616,180
10	Ramanathapuram	9	4	1,285,383	5	1,136,405	6	1,526,578
11	Tirunelveli	9	6	2,078,629	3	651,650	7	2,250,716
12	Kanyakumari	4	3	934,623	1	62,292	1	276,605

Chingleput and 6 out of 8 in South Arcot show an unbalanced distribution of population in its taluks. Excepting Chingleput and North Arcot in all other districts, the taluks having population above average contain more than 50% of the population of the district, the percentage ranging from 53.08 in Ramanathapuram to 93·75 in Kanyakumari. North Arcot alone has approximately half and half in taluks above and below average. In Chingleput, 54.49% of the population is contained in taluks below average. Generally bigger taluks seem to be the special feature of this State. Again the formation of taluks depended not on the population nor on the quantum of work accruing to a Tahsildar. It has depended more or less on the total revenue collection of the area which is always higher in wet tracts than in dry tracts. Again the wet areas, for instance in the delta of Cauvery, have a greater tendency for population to be concentrated than other parts of the State. No scientific approach has been made to the problem of redistributing the taluks on the basis of population, so that equal attention could be devoted to the development of all sectors of population.

Density by taluks

21. A table (Table IV-26) has been constructed arranging the taluks on the basis of density. It has been divided into two parts—one of taluks whose densities are higher than the average for the State and the other of taluks whose densities are lower than that of the State.

TABLE IV-26

Distribution of general density (persons per sq. mile) in the taluks of the State arranged by districts

(General density for the State — 672)

District	Density (population per sq. mile)	No. of taluks whose densities are: Above 100% of that of State	76–100% above that of State	51–75% above that of State	26–50% above that of State	Upto 25% above that of State	No. of taluks whose densities are: upto 25% below that of State	26–50% below that of State	51–75% below that of State	76–100% below that of State
1	2	3	4	5	6	7	8	9	10	11
Chingleput	*696*	1 (Saidapet)	...	...	..	3 (Tiruttani Sriperumbudur Kanchipuram)	3 (Tiruvallur Chingleput Maduranthakam)	1 (Ponneri)	...	...
North Arcot	671	...	...	...	3 (Walajapet Vellore Arni)	4 (Arkonam Gudiyatham Tiruppattur Tiruvannamalai)	2 (Cheyyar Wandiwash)	2 (Polur Chengam)	...	...
South Arcot	724	...	...	3 (Villupuram Cuddalore Chidambaram)	...	1 (Tirukkoyilur)	3 (Gingee Tindivanam Vriddhachalam)	1 (Kallakurichi)	...	...

TABLE IV-26 (Contd.)

Distribution of general density (persons per sq. mile) in the taluks of the State arranged by districts

(General density for the State — 672)

District	Density (population per sq. mile)	No. of taluks whose densities are: Above 100% of that of State	76–100% above that of State	51–75% above that of State	26–50% above that of State	Upto 25% above that of State	No. of taluks whose densities are: Upto 25% below that of State	26–50% below that of State	51–75% below that of State	76–100% below that of State
1	2	3	4	5	6	7	8	9	10	11
Salem	539	1 (Salem)	...	...	1 (Sankari)	2 (Omalur Tiruchengode)	2 (Rasipuram Namakkal)	3 (Krishnagiri Dharmapuri Attur)	2 (Hosur Harur)	1 (Yercaud)
Coimbatore	590	1 (Coimbatore)	...	...	1 (Erode)	...	3 (Palladam Avanashi Pollachi)	4 (Bhavani Gopichettipalayam Dharapuram Udumalpet)	...	...
Nilgiri	417	...	...	...	...	1 (Coonoor)	...	1 (Ootacamund)	1 (Gudalur)	...
Madurai	660	1 (Madurai)	...	...	...	2 (Dindigul Nilakkottai)	2 (Periyakulam Tirumangalam)	2 (Palni Melur)	...	1 (Kodaikanal)
Tiruchirapalli	579	1 (Tiruchirapalli)	...	...	...	1 (Lalgudi)	4 (Udaiyarpalayam Musiri Karur Alangudi)	3 (Perambalur Kulittalai Tirumayam)	1 (Kulathur)	...

TABLE IV - 26 (Contd.)

Distribution of general density (persons per sq. mile) in the taluks of the State arranged by districts

(General density for the State: 672)

District	Density (population per sq. mile)	No. of taluks whose densities are: Above 100% of that of State	76-100% above that of State	51-75% above that of State	26-50% above that of State	Upto 25% above that of State	No of taluks whose densities are: Upto 25% below that of State	26-50% below that of State	51-75% below that of State	76-100% below that of State
1	2	3	4	5	6	7	8	9	10	11
Thanjavur	868	1	1	3	3	1	2	1	...	..
		(Kumbakonam)	(Mayuram)	(Sirkali Papanasam Nagapattinam)	(Nannilam Thanjavur Mannargudi)	(Pattukkottai)	(Orathanad Tiruthuraipundi)	(Arantangi)		
Ramanathapuram	502	...	...	...	..	1	4	4	...	
						(Srivilliputtur)	(Tirupattur Ramanathapuram Paramakudi Sattur)	(Sivaganga Tiruvadanai Mudukulathur Aruppukkottai)		
Tirunelveli	619	...	...	1	3	1	2	2	...	
				(Tirunelveli)	(Srivaikuntam Shencottah Tiruchendur)	(Tenkasi)	(Sankaranayinarkoil Ambasamudram)	(Kovilpatti Nanguneri)		
Kanyakumari	1,544	3	...	...	...	...	..	1	...	
		(Vilavancode Kalkulam Agasteeswaram)						(Thovala)		

In Table IV-27 is exhibited the character of taluks whose densities are higher than the average for the State. They have been divided into entirely rural taluks; non-industrial taluks each containing atleast one non-industrial town and industrial taluks each containing atleast one industrial town.

TABLE IV-27

Character of taluks whose densities are higher than the average for the State, 1961

(a) Entirely rural
(b) Non-industrial taluks each containing atleast one non-industrial town
(c) Industrial taluks each containing atleast one industrial town

Name of District	Number of taluks whose densities are above that of the State as a whole														
	Above 100%			76 — 100%			51 — 75%			26 — 50%			Upto 25%		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Chingleput	...	...	1 (Saidapet)	...	...	...	...	...	...	...	...	...	...	1 (Tiruttani)	2 (Sriperumbudur Kanchipuram)
North Arcot	...	...	...	...	...	...	...	...	...	...	...	3 (Walajapet Vellore Arni)	...	1 (Tiruvannamalai)	3 (Arkonam Gudiyatham Tiruppattur)
South Arcot	...	...	...	...	...	...	...	1 (Chidambaram)	2 (Villupuram Cuddalore)	...	...	...	...	1 (Tirukoyilur)	...
Salem	...	...	1 (Salem)	...	...	...	...	...	...	...	1 (Sankari)	...	...	...	2 (Omalur Tiruchengode)
Coimbatore	...	...	1 (Coimbatore)	...	...	...	...	...	...	...	...	1 (Erode)	...	...	...
Nilgiri	...	...	...	...	...	...	...	...	...	...	...	...	...	1 (Coonoor)	...

TABLE IV-27 (Contd.)

Character of taluks whose densities are higher than the average for the State, 1961

(a) Entirely rural
(b) Non-industrial taluks each containing atleast one non-industrial town
(c) Industrial taluks each containing atleast one industrial town

Name of District	Above 100%			76 — 100%			51 — 75%			26 — 50%			Upto 25%		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Madurai	...	...	1 (Madurai)	...	...	...	...	...	...	...	...	...	..	1 (Nilakkottai)	1 (Dindigul)
Tiruchirapalli	...	...	1 (Tiruchirapalli)	...	...	...	...	...	...	...	...	...	...	1 (Lalgudi)	...
Thanjavur	...	...	1 (Kumbakonam)	...	1 (Mayuram)	...	...	2 (Sirkali Papanasam)	1 (Nagapattinam)	...	2 (Nannilam Mannargudi)	1 (Thanjavur)	..	1 (Pattukkottai)	...
Ramanathapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	. .	1 (Srivilliputtur)
Tirunelveli	...	...	...	...	...	...	...	...	1 (Tirunelveli)	...	2 (Tiruchendur) Shencottah)	1 (Srivaikuntam)	...	1 (Tenkasi)	...
Kanyakumari	...	3 (Vilavancode Kalkulam Agasteeswaram)	...	...	...	...	...	...	...	...	...	...	...	...	...

No taluk is entirely rural that is having no towns. In the category of non-industrial taluks having no industrial towns fall three taluks of Kanyakumari with a density of above 100% of the State average. In category C-industrial taluks are the taluks of Saidapet, Salem, Coimbatore, Madurai, Tiruchirapalli and Kumbakonam. Saidapet is located near Madras City with a large number of satellite industrial towns. In Salem, Coimbatore, Madurai, Tiruchirapalli and Kumbakonam are contained important towns of the State which are industrial and which have enhanced the density of the area. In the range 51-75%, Chidambaram of South Arcot district and Sirkali and Papanasam of Thanjavur district are found They represent the well settled agricultural belt of Madras State. Villupuram, Cuddalore, Nagapattinam and Tirunelveli though located in agricultural belt, have well developed industrial towns which have altered their character. No distinct regional grouping or pattern can be found in the distribution of taluks in the State. They form a disjointed and broken pattern. It is also due to the disjointed growth of different areas of the State and also to the relative agricultural facilities available. The heavy densities have to be explained by the growth of particular towns in the higher density ranges and to the location of agriculture and trade in the lower density ranges.

When I examine the non-industrial taluks exhibited in Table IV-28, no pattern can again be found.

Table IV-29 classifies the industrial taluks according to density ranges.

In general the pattern of taluks in Madras falls within 25% of the average density range.

Substantial variation in the lower group has been exihbited by Hosur, Harur, Gudalur, Kulathur, Yercaud and Kodaikanal. It is due to the comparative backwardness of these areas owing to a large extent to the poor communications linking these areas to other parts of the State. Yercaud and Kodaikanal represent higher altitudes of the State where plantation is the chief industry. Thus it can be seen that no regional variation can be seen in the density ranges of the taluks in Madras State which can be subjected to any scientific study.

Table IV-30 has been presented discussing the character of taluks whose densities are lower than the average for the State. Tables IV-31 to 33 give the number of taluks, their population, area and density for each characteristic.

TABLE IV–28

(b) Non-industrial taluks each containing atleast one non-industrial town whose densities are above that of State

Name of District	Taluks with density 100% above that of State				Taluks with density 76—100% above that of State				Taluks with density 51—75% above that of State				Taluks with density 26—50% above that of State				Taluks with density upto 25% above that of State			
	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Chingleput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	213,814	314.9	679
North Arcot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	258,872	374.6	691
South Arcot	...	...	...	...	...	...	...	...	1	433,997	403.8	1,075	...	...	...	...	1	400,111	584.3	685
Salem	...	...	...	...	...	...	...	...	...	...	...	...	1	242,311	276.9	875	...	...	..	...
Coimbatore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...
Nilgiri	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	1	173,613	240.7	721
Madurai	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	291,006	410.4	709
Tiruchirapalli	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	266,232	373.0	714
Thanjavur	...	...	...	...	1	364,059	282.5	1,289	2	418,679	398.7	1,050	2	538,845	592.2	910	1	290,303	406.7	714
Ramanathapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tirunelveli	...	...	...	...	...	...	...	...	...	...	...	...	2	358,064	393.4	910	1	335,570	402.8	833
Kanyakumari	3	934,623	503.0	1,858	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE IV—29

(c) Industrial taluks each containing atleast one industrial town whose densities are above that of State

Name of District	Taluks with density 100% above that of State				Taluks with density 76–100% above that of State				Taluks with density 51–75% above that of State				Taluks with density 26–50% above that of State				Taluks with density upto 25% above that of State			
	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Chingleput	1	393,886	227.2	1,734	...	...	...	...	...	...	...	...	...	...	...	...	2	557,794	717.8	777
North Arcot	...	...	...	...	...	...	...	...	...	...	...	...	3	941,470	1,002.9	939	3	1,046,336	1,426.3	734
South Arcot	...	...	...	...	...	...	...	...	2	869,662	799.6	1,088	...	...	...	...	...	...	...	...
Salem	1	616,613	376.6	1,637	...	...	...	...	...	...	...	...	...	...	...	...	2	671,752	883.1	761
Coimbatore	1	730,374	528.4	1,382	...	...	...	...	...	...	...	...	1	511,510	599.4	853	...	...	...	...
Nilgiri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madurai	1	670,650	268.0	2,502	...	...	...	...	...	...	...	...	...	...	...	...	1	602,547	893.7	674
Tiruchirapalli	1	502,740	269.4	1,866	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thanjavur	1	367,868	211.8	1,737	...	...	...	...	1	279,309	240.0	1,164	1	361,650	361.4	1,001	...	...	...	...
Ramanathapuram	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	349,130	441.9	790
Tirunelveli	...	...	...	...	...	...	...	...	1	338,015	325.2	1,039	1	331,020	362.1	914	...	...	...	...
Kanyakumari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE IV-30

Character of taluks whose densities are lower than the average for the State, 1961

a) Entirely rural
b) Non-industrial taluks each containing atleast one non-industrial town
c) Industrial taluks each containing atleast one industrial town

Name of District	Number of taluks whose densities are below the average for the State											
	Below 26%			26 – 50%			51 – 75%			76 – 100%		
	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)	(a)	(b)	(c)
1	2	3	4	5	6	7	8	9	10	11	12	13
Chingleput	...	2 (Tiruvallur Chingleput)	1 (Maduranthakam)	...	1 (Ponneri)	.	..	.	...	...	...	.
North Arcot	..	2 (Cheyyar Wandiwash)	.	1 (Chengam)	1 (Polur)	.	.	.	.		..	..
South Arcot	1 (Gingee)	2 (Tindivanam Vriddhachalam)	..		1 (Kallakurichi)	.	.			.	..	..
Salem		2 (Rasipuram Namakkal)	...		3 (Krishnagiri Attur Dharmapuri)	..	..	2 (Harur Hosur)	..	1 (Yercaud)	..	..
Coimbatore		.	3 (Palladam Avanashi Pollachi)	.	2 (Gopichettipalayam Dharapuram)	2 (Bhavani Udumalpet)	..	.	.	...	.	...
Nilgiri		...		.	.	1 (Ootacamund)	..	1 (Gudalur)	.	...	..	...
Madurai	.	1 (Periyakulam)	1 (Tirumangalam)	...	1 (Melur)	1 (Palni)	...	.			1 (Kodaikanal)	
Tiruchirapalli	..	2 (Udaiyarpalayam Musiri)	2 (Karur Alangudi)		2 (Perambalur Tirumayam)	1 (Kulittalai)	1 (Kulathur)	..	.			..
Thanjavur	...	2 (Orathanad Tiruthuraipundi)	.	..	1 (Arantangi)		.	.	.	.	.	
Ramanathapuram	..	3 (Tirupattur Paramakudi Ramanathapuram)	1 (Sattur)	..	4 (Sivaganga Tiruvadanai Mudukulathur Aruppukottai)	...		.	.	.	.	
Tirunelveli		1 (Sankaranayinarkoil)	1 (Ambasamudram)		1 (Nanguneri)	1 (Kovilpatti)		.		.	..	
Kanyakumari	...	...	.	1 (Thovala)	...	..	..	.	..	..	...	..

TABLE IV–31

Character of taluks whose densities are lower than the average for the State

(a) Entirely rural

Name of District	Taluks with density 25% below that of State				Taluks with density 26–50% below that of State				Taluks with density 51–75% below that of State				Taluks with density 76–100% below that of State			
	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No. of Taluks	Population	Area in sq. miles	Density	No of Taluks	Population	Area in sq. miles	Density
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
North Arcot	...	...	...	...	1	222,703	652.3	341	...	...	...	...	...	...	...	...
South Arcot	1	254,443	409.7	621	...	...	...	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	...	...	...	...	1	23,753	148·0	160
Tiruchirapalli	...	...	...	...	...	...	...	...	1	169,300	512.4	330	...	...	...	...
Kanyakumari	...	...	...	...	1	62,292	142.5	437	...	...	...	...	...	...	...	...

TABLE IV—32

Character of taluks whose densities are lower than the average for the State

(b) Non-industrial taluks each containing atleast one non-industrial town

Name of District	Taluks with density 25% below that of State				Taluks with density 26–50% below that of State				Taluks with density 51–75% below that of State				Taluks with density 76–100% below that of State			
	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Chingleput	2	516,491	850.1	608	1	230,800	514.5	449	...	...	...	...	...	...	...	...
North Arcot	2	431,153	666.6	647	1	245,792	567.7	433	...	...	...	...	...	...	...	...
South Arcot	2	706,282	1,137.3	621	1	383,478	873.4	439	...	...	...	...	...	...	...	...
Salem	*2*	*620,917*	*998.1*	*622*	*3*	*1,087,805*	*2,489.6*	437	*2*	*540,957*	*1,878.9*	*288*	...	...	...	...
Coimbatore	...	...	...	...	2	728,569	1,982.3	368	...	...	...	...	...	...	...	...
Nilgiri	...	...	...	...	...	...	...	...	1	66,057	278.9	237	...	...	...	...
Madurai	1	654,303	1,106.0	592	1	242,520	484.3	501	...	...	...	...	1	50,710	360.4	141
Tiruchirapalli	2	821,412	1,424.2	577	2	449,398	1,044.9	430	...	...	...	...	...	...	...	...
Thanjavur	2	469,246	844.4	556	1	155,968	401.3	389	...	...	...	...	...	...	...	...
Ramanathapuram	3	730,966	1,341.6	545	4	987,840	2,466.6	400	...	...	...	...	...	...	...	...
Tirunelveli	1	335,928	634.8	529	1	325,006	704.9	461	...	...	...	...	...	...	...	...
Kanyakumari	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE IV-33

Character of taluks whose densities are lower than the average for the State

(c) Industrial taluks each containing atleast one industrial town

Name of District	Taluks with density 25% below that of State				Taluks with density 26-50% below that of State				Taluks with density 51-75% below that of State				Taluks with density 76-100% below that of State			
	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density	No. of taluks	Population	Area in sq. miles	Density
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Chingleput	1	283,627	530.6	535	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore	3	1,113,839	1,787.2	623	2	473,179	1,127.3	420	...	...	...	...	...	...	...	...
Nilgiri	...	...	...	...	1	169,638	462.1	367	...	...	...	...	...	...	...	...
Madurai	1	410,682	721.2	569	1	288,809	624.9	462	...	...	...	...	...	...	...	...
Tiruchirapalli	2	535,641	957.4	559	1	445,355	923.9	482	...	...	...	...	...	...	...	...
Ramanathapuram	1	353,852	578.5	612	...	...	...	...	...	...	...	...	...	...	...	...
Tirunelveli	1	293,586	498.1	589	1	413,090	1,086.2	380	...	...	...	...	...	...	...	...

On an examination of the totality of the figures exhibited in Tables IV-26-33 one has to come to the conclusion that no geographical pattern can be observed by arranging areas of higher density in descending order and relating to rurality and other non-industrial and industrial urban growths. Rainfall, crop pattern, irrigation and communications have not determined the density ranges. Historically, a higher density range is to be found in Thanjavur taluk which is the case. The development in the British regime has centred round the headquarters of districts which is reflected in the headquarters taluk of the district having a higher density range. Except for low density taluks which are comparatively undeveloped being scattered in highly inaccessible parts of the State, no link can be found between density and communication facility because the higher density taluks are found in comparatively less developed areas like Thanjavur.

Census houses and households

22. The census house is a structure or part of a structure which is viable and which can be used as a dwelling, a shop-cum-dwelling or a place of business, school or workshop. If it is used for the purpose of common living or work or business it is treated as an occupied census house. Any census house which is used as a residence is a dwelling. A household refers to a group of persons who commonly live together and take their meals from the common mess unless the exigencies of work prevent any of them from doing so.

Proportion of households to houses

23. The proportion of households to 100 occupied houses and percentage of households to number of census houses in rural and urban areas district by district is given below.

TABLE IV-34

Proportion of households to 100 occupied residential census houses

State/District	Total	Rural	Urban
1	2	3	4
Madras State	**114**	**108**	**134**
Madras District	237	...	237
Chingleput District	114	109	140
North Arcot District	119	115	135
South Arcot District	111	110	121
Salem District	107	106	112
Coimbatore District	117	113	128
Nilgiri District	106	105	106
Madurai District	119	110	144
Tiruchirapalli District	109	107	118
Thanjavur District	109	107	120
Ramanathapuram District	107	106	112
Tirunelveli District	103	102	107
Kanyakumari District	109	108	114

TABLE IV-35

Percentage of households to number of census houses in rural and urban areas district by district

State/District	Total	Rural	Urban
1	2	3	4
Madras State	**114.01**	**108.26**	**134.37**
Madras District	237.01	...	237.01
Chingleput District	113.90	108.61	139.54
North Arcot District	118.60	115.22	135.29
South Arcot District	111.08	109.79	121.02
Salem District	106.99	106.04	112.47
Coimbatore District	116.58	112.60	128.16
Nilgiri District	105.76	105.33	106.31
Madurai District	118.72	109.99	144.43
Tiruchirapalli District	108.89	106.73	118.20
Thanjavur District	108.96	106.66	119.75
Ramanathapuram District	107.29	105.78	112.16
Tirunelveli District	103.37	101.76	107.17
Kanyakumari District	109.29	108.49	114.07

It indicates the frequency of census households in dwellings. All census houses have been discussed in detail in my Housing Report and I do not propose to cover it again. The only significant feature to be noticed is that in Madras State, 114 households reside in 100 houses. In rural areas, 108 households reside as against 134 in urban. Madras City has 237 households for 100 houses which is quite high, indicating a high degree of congestion. The next in rank are Madurai and North Arcot which have 119 and the lowest is recorded by Tirunelveli district which has only 103 households per 100 houses indicating more *rural characteristics. The difference between rural* and urban areas is marked in Madurai where the figures are 110 for rural and 144 for urban. In Nilgiri district. the difference between urban and rural set-up is negligible, the figures being 106 and 105 respectively. Among the urban areas next to Madras are Madurai and Chingleput districts the figures being *144.43 for Madurai and 139.54 for* Chingleput. The high percentage in Chingleput district is due to its proximity to Madras City, the contiguous areas along the city of Madras having the same characteristics as the city itself. The following are the taluks recording highest proportions in decreasing order.

	Taluk	Total	Urban
	1	2	3
1.	Madurai	142	167
2.	Arni	131	139
3.	Palladam	131	149
4.	Arkonam	130	152
5.	Kanchipuram	129	157
6.	Vellore	129	148
7.	Periyakulam	124	136
8	Coimbatore	122	123
9.	Cheyyar	121	137
10.	Saidapet	120	136
11.	Walajapet	119	125
12.	Polur	119	125
13.	Pollachi	119	128
14.	Kumbakonam	119	141

In the rural set-up, Tirunelveli district has the lowest, 101.76 while North Arcot district has the highest, 115.22.

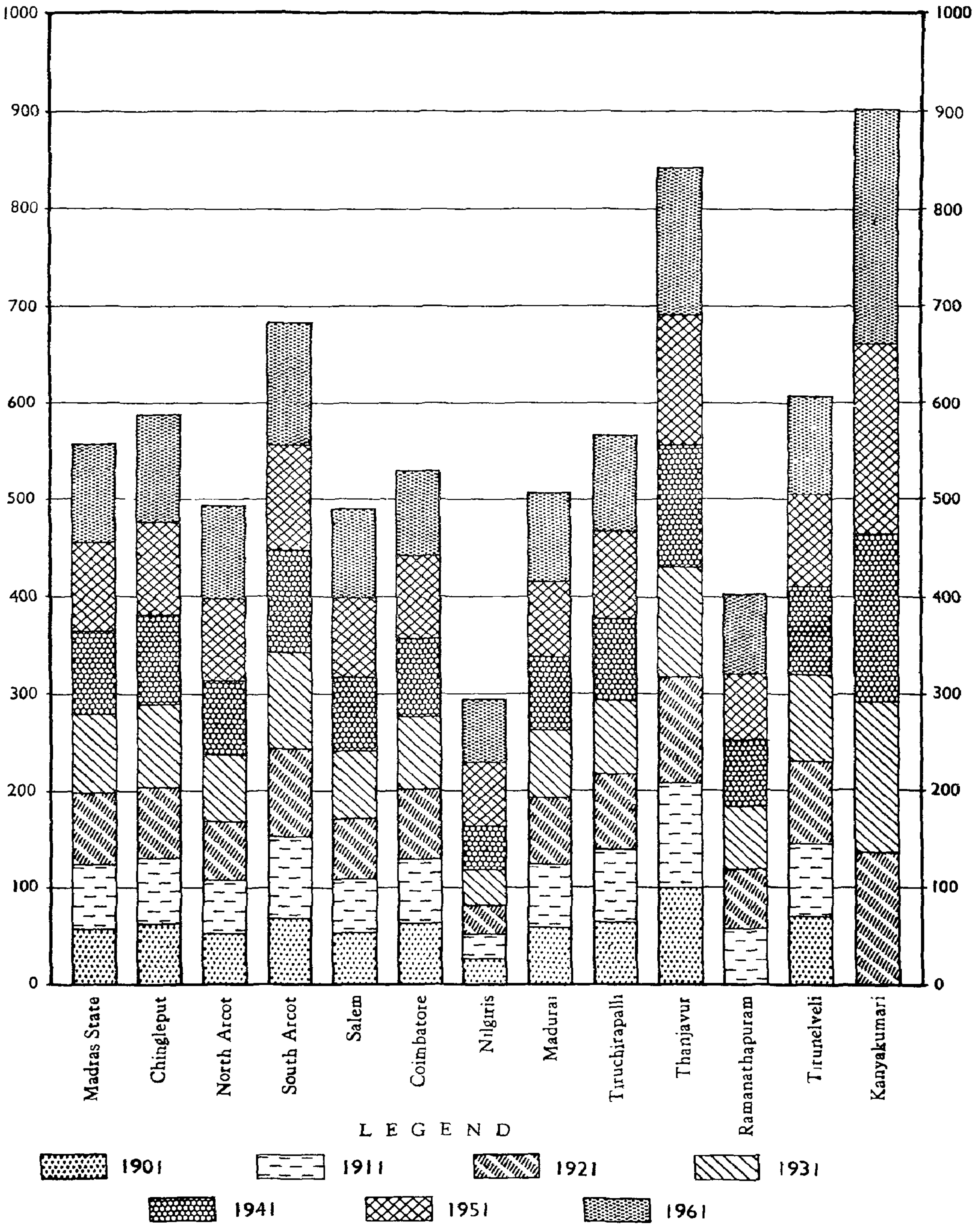
TABLE IV–36

Number of census houses per square mile in the State 1901 – 1961
(Only rural areas)

Name of District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State ...	**103**	**91**	**86**	**79**	**75**	**67**	**57**
Chingleput ...	112	96	92	84	74	68	62
North Arcot ..	97	84	77	68	60	55	53
South Arcot ...	127	109	106	98	90	85	68
Salem ...	92	82	76	69	62	55	54
Coimbatore ...	88	86	80	75	72	66	63
Nilgiri ...	65	66	45	37	29	26	26
Madurai ...	92	78	75	70	68	65	59
Tiruchirapalli ...	100	89	84	77	77	75	64
Thanjavur ...	152	134	126	114	109	107	100
Ramanathapuram ...	82	69	68	64	61	58	...
Tirunelveli ...	102	94	92	89	85	75	70
Kanyakumari ...	242	196	173	155	136	N.A	N.A

Note :- In the year 1901, Ramanathapuram district was included in Madurai and Tirunelveli districts. 1901, 1911 figures for Kanyakumari are not available.

Number of Census Houses per Square Mile in Rural Areas of the State and Districts, 1901 - 1961



Density of Census houses in rural areas

24. The density of Census houses per sq. mile in rural areas has been presented in Table IV-36 for the period 1901-1961. Kanyakumari, Thanjavur and South Arcot show a concentration of census houses. Ramanathapuram has the lowest concentration. Only the Nilgiri district has recorded a fall from 1951-1961. A graph has been drawn indicating the variation. Chingleput, South Arcot, Thanjavur and Kanyakumari have more houses per sq. mile than the State average. Districts of North Arcot, Salem, Madurai, Tiruchirapalli and Tirunelveli conform more or less to the State average It will be seen that there is great scope for construction of houses in Ramanathapuram and Nilgiri. Surprisingly, Coimbatore has not recorded any apparent variation from 1941 to 1961 inspite of its phenomenal industrial development. Perhaps this is due to the fact that all industrial establishments, however big they be, have been returned as one census house in this census.

Table IV-37 gives the average number of census households per census house in each district for rural and urban areas.

TABLE IV-37

Average number of census households per census house in each district in Rural & Urban areas separately

District	Average number of census households per census house	
	Rural	Urban
1	2	3
1. Madras	..	2.37
2. Chingleput	1.09	1.40
3. North Arcot	1 15	1 35
4. South Arcot	1.10	1.21
5. Salem	1 06	1 12
6. Coimbatore	1.13	1.28
7. Nilgiri	1 05	1.06
8. Madurai	1.10	1.44
9. Tiruchirapalli	1.07	1.18
10. Thanjavur	1 07	1.20
11. Ramanathapuram	1.06	1.12
12. Tirunelveli	1.02	1.07
13. Kanyakumari	1.08	1.14

Distribution of households by number of rooms occupied in slum and non-slum areas of cities

25. In the following table (Table IV-38) is presented the distribution of 1,000 households in non-slum areas of cities of the State.

TABLE IV-38

Distribution of 1,000 households in cities (Non-slum areas) by number of rooms occupied

Households occupying

Name of City	No defined room	One room	Two rooms	Three rooms	Four rooms	5 rooms and over	Rooms not stated
1	2	3	4	5	6	7	8
Madras City	2	598	218	89	49	44	...
Vellore Municipality	....	643	212	65	51	29	...
Salem Municipality	10	506	244	107	60	54	19
Coimbatore Municipality	1	609	207	84	41	57	1
Madurai Municipality	5	733	192	44	17	9	...
Tiruchirapalli Municipality	8	649	182	72	37	46	6
Thanjavur Municipality	2	539	229	120	58	52	...
Tuticorin Municipality	15	646	178	91	38	25	7
Nagercoil Municipality	...	341	264	171	103	120	1

No "no room" household is found in Vellore and Nagercoil. One room and two rooms constitute the bulk of it, two rooms being more marked in Nagercoil. In 3 roomed households, Nagercoil, Thanjavur and Salem show better figures. In 4-roomed households, Nagercoil is ahead of all the cities followed by Salem. The same is the position with 5 rooms except that Coimbatore takes the second place. It would appear that the congestion is less in cities which are less industrialised like Salem and Nagercoil.

Table IV-39 showing the distribution of 1,000 households in slum areas of cities by number of rooms occupied is also presented below.

TABLE IV–39

Distribution of 1,000 households in cities (slum areas) by number of rooms occupied

Name of city	Households occupying: No defined room	1 room	2 rooms	3 rooms	4 rooms	5 rooms	More than 5 rooms
1	2	3	4	5	6	7	8
Madras (M.C.)	62	819	90	20	6	2	1
Vellore (M)	55	792	118	21	9	3	2
Salem (M)	102	768	103	22	3	1	1
Coimbatore (M)	85	799	86	16	7	2	5
Tiruchirapalli (M)	81	753	118	34	7	2	5
Thanjavur (M)	265	720	15	...	...	...	...
Madurai (M)	71	826	89	11	2	1	...
Tuticorin (M)	60	877	31	24	...	5	3
Nagercoil (M)	74	565	232	110	13	3	3

The bulk of the houses is in one room category and no defined room. Thanjavur leads the rest followed by Salem in households occupying no defined room. Thus slum areas present an altogether different picture from what we have seen in non-slum areas.

Uses of Census houses in cities and towns

26. Table IV–40 gives the distribution of 1,000 census houses according to use in cities and towns. Frequency of vacant houses is more in the VIth class. The range is from 39 in Class I to 137 in Class VI and shows an increasing trend from previous classes except in Classes III and V; in workshop-*cum*-dwelling, a lower figure is recorded in classes VI, IV and III than the average for all towns. A large number is found in VIth class which may indicate prevalence of worksheds and small industrial establishments combined with dwelling. Under factories, workshops and worksheds, no great variation is found from category to category. However Class I leads in workshop-*cum*-dwellings, business houses and offices, factories, workshops and worksheds.

TABLE IV–40

Distribution of 1,000 census houses according to use in cities and towns.

Class of City and Town	Census Houses used as: Vacant	Dwellings	Shop-*cum*-dwelling	Workshop-*cum*-dwelling	Business houses and offices	Factories, workshops & worksheds	Schools & other educational institutions	Others
1	2	3	4	5	6	7	8	9
All Classes	57	774	8	27	10	27	4	93
I Class	39	777	8	29	11	32	4	100
II Class	63	775	10	20	8	28	4	92
III Class	61	778	7	28	9	24	4	89
IV Class	76	774	7	19	8	21	4	91
V Class	71	753	8	47	7	23	4	87
VI Class	137	715	5	16	6	22	4	95

Percentage variation of population during 1951–61 by taluks

27. Table (Table IV-41) has been presented classifying the taluks by certain ranges of increase in percentage during 1951—61. It is obvious that there will be inequal distribution of taluks in each denomination of percentage increase.

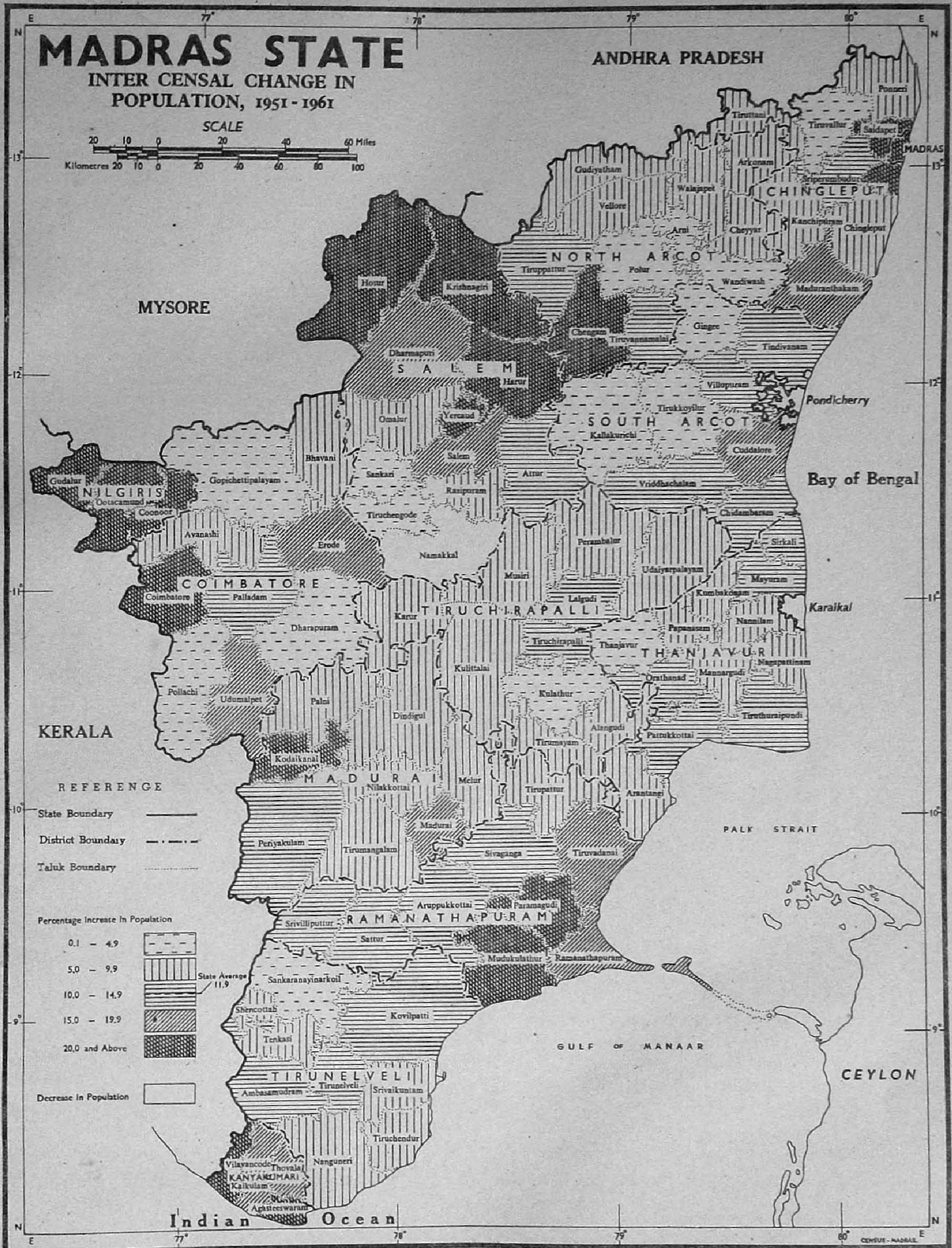


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TABLE IV-41

Percentage increase or decrease of population in districts and taluks during 1951—61

(Average increase for the State during 1951-61 — 11.85%)

District	Number of taluks	Increase a upto 9.9%	b 10 – 19.9%	c 20 – 24.9%	d 25 – 29.9%	e 30 – 39.9%	f 40 – 49.9%	g 50% & above	Decrease
1	2	3	4	5	6	7	8	9	10
Madras 22.11	...	...	...	...	...	...	...	...	...
Chingleput 12.17	8	Ponneri 5.98	Sriperumbudur 14.58	...	Saidapet 2690	...	...	...	...
		Tiruvallur 4.42	Maduranthakam 15.94	...	...	...	...	...	...
		Tiruttani 7.47	...	...	...	...	...	...	...
		Chingleput 9.42	...	...	...	...	...	...	...
		Kanchipuram 8.53	...	...	...	...	...	...	...
North Arcot 8.51	11	Arkonam 8.94	Tiruppattur 14.13	Chengam 24.33	...	...	...	...	...
		Walajapet 6.08	Tiruvannamalai 12.84						
		Gudiyatham 6.36	...	...	...	...	...	...	...
		Vellore 6.92	...	...	...	...	...	...	...
		Arni 1.39	...	...	...	...	...	...	...
		Cheyyar 5.50	...	...	...	...	...	...	...
		Wandiwash 4.82	...	...	...	...	...	...	...
		Polur 3.69	...	...	...	...	...	...	...
South Arcot 9.77	8	Gingee 3.92	Tindivanam 10.91	...	...	...	...	...	...
		Tirukkoyilur 4.68	Villupuram 12.50	...	...	...	...	...	..

TABLE IV-41 (Contd.)

Percentage increase or decrease of population in districts and taluks during 1951—61

(Average increase for the State during 1951-61 — 11.85%)

District	Number of taluks	Increase a upto 9.9%	b 10–19.9%	c 20–24.9%	d 25–29.9%	e 30–39.9%	f 40–49.9%	g 50% & above	Decrease
1	2	3	4	5	6	7	8	9	10
		Kallakurichi 3.91	Vriddhachalam 11.34	...	...	...	...	...	...
			Cuddalore 16.85	...	...	...	...	...	...
			Chidambaram 11.57	...	...	...	...	...	...
Salem 12.85	12	Tiruchengode 2.57	Dharmapuri 19.63	Hosur 20.34	Harur 28·87	...	...	...	Namakkal 0.85
		Rasipuram 7.95	Salem 18.30	Krishnagiri 22.27	...	...	...	...	...
		Omalur 9.56	Attur 11.69	Yercaud 20.34	...	...	...	...	...
		Sankari 3.20		...	...	...	...	...	...
Coimbatore 12.78	9	Bhavani 7.37	Erode 16.35	...	Coimbatore 29.84	...	...	...	...
		Gopichetti-palayam 2.02	Palladam 11.18	...	...	...	...	...	...
		Dharapuram 0.94	Udumalpet 15.88	...	..	...	...	...	...
		Avanashi 8.50	...	...	...	...	...	...	...
		Pollachi] 1.09	...	...	...	...	...	...	...
Nilgiri 31.30	3	...	...	Coonoor 23.99	...	Ootacamund 34.51	Gudalur 44.86	...	...
Madurai 11.05	8	Dindigul 8.77	Periyakulam 11.96	...	Kodaikanal 25.99	...	...	...	...
		Palni 6.18	Madurai 18.80	...	...	...	...	...	...

TABLE IV-41 (Contd.)

Percentage increase or decrease of population in districts and taluks during 1951—61

(Average increase for the State during 1951-61 — 11.85%)

District	Number of taluks	Increase a upto 9.9%	b 10-19.9%	c 20-24.9%	d 25-29.9%	e 30-39.9%	f 40-49.9%	g 50% & above	Decrease
1	2	3	4	5	6	7	8	9	10
		Nilakkottai 4.99	...	...	...	...	...	...	...
		Melur 8.17	...	...	...	...	...	...	..
		Tirumangalam 9.67	...	...	...	...	...	...	...
Tiruchirapalli 8.36	10	Perambalur 7.57	Lalgudi 11.43	...	...	...	...	...	...
		Udaiyar-palayam 9.91	Tiruchirapalli 13.00	...	...	...	...	...	...
		Musiri 5.51	...	...	...	...	...	...	...
		Karur 6.27	...	...	...	...	.	. .	...
		Kulittalai 8.38	...	...	...	...	...	...	...
		Kulathur 1.78	...	...	...	...	...	...	...
		Alangudi 8.18	...	...	...	...	...	...	...
		Tirumayam 6.03	...	...	...	...	...	...	...
Thanjavur 8.82	12	Kumbakonam 5.68	Sirkali 13.35	...	...	...	...	...	...
		Nannilam 7.46	Mayuram 13.24	...	...	...	...	...	...
		Papanasam 7.58	Orathanad 10.21	..	...	...	...	...	...
		Thanjavur 4.93	Tiruthuraipundi 10.40	...	...	...	...	...	...
		Mannargudi 9.24	Pattukkottai 11.25	...	...	...	...	..	...

TABLE IV—41 (Contd.)

Percentage increase or decrease of population in districts and taluks during 1951—61

(Average increase for the State during 1951 - 61—11.85%)

District	Number of taluks	Increase a upto 9.9%	b 10-19.9%	c 20-24.9%	d 25-29.9%	e 30-39.9%	f 40-49.9%	g 50% & above	Decrease
1	2	3	4	5	6	7	8	9	10
		Nagapattinam 6.92	...	...	...	..	...	...	...
		Arantangi 8.89	...	...	...	..	...	...	...
Ramanathapuram 16.33	9	Tirupattur 5.44	Sivaganga 13.10	Paramakudi 24.79	..	...	Mudukulathur 49.06	...	...
		..	Tiruvadanai 16.48	...	.	...		..	...
		...	Ramanathapuram 16.92	...	...	...	...	...	...
		...	Aruppukkottai 10.19	...	...	...	...	...	...
		...	*Sattur* 13.98	...	...	...	...	..	...
		...	Srivilliputtur *14.48*	...	...	...	...	...	...
Tirunelveli 8.99	9	Sankaranayinar-koil 2.09	Kovilpatti 13.05	...	...	...	...	...	...
		Srivaikuntam *9.66*	Tirunelveli *13.71*	...	...	..	...	...	...
		Tenkasi 8.54	Shencottah 10.22	..	...	...	...	...	...
		Nanguneri 7.33	Ambasamudram 10.77	...	...	...	...	...	...
		Tiruchendur 6.38	..	...	...	..	...	...	...
Kanyakumari *20.64*	4	...	Kalkulam *18.42*	Vilavancode *21.91*	...	...	...	...	...
			Thovala 17.58	Agasteeswaram 22.71	...	.	...	...	...

Note. 1) Madras district has not been divided into taluks for census purposes
2) The district percentage increase has been shown in Col. 1
3) The taluk percentage increase or decrease has been shown below the name

In Table IV–42 is exhibited rural and urban components of increase in population of taluks which have shown increase above the State average of 11.85%.

TABLE IV–42

Rural and urban components of increase in population of taluks which have shown increase above State average (State average–11.85%)

Name of District	Name of Taluk	Percent increase of taluk During 1951–61	Percent increase of rural population of taluk 1951–61	Percent increase of urban population of taluk 1951–61
1	2	3	4	5
Chingleput	Sriperumbudur	14.58	14.22	16.16
	Saidapet	26.90	0.16	87.53
	Maduranthakam	15.94	14.38	40.46
North Arcot	Tiruppattur	14.13	7.23	44.76
	Chengam	24.33	24.33	...
	Tiruvannamalai	12.84	12.57	14.06
South Arcot	Villupuram	12.50	10.97	22.01
	Cuddalore	16.85	14.07	24.72
Salem	Hosur	20.34	19.67	29.92
	Krishnagiri	22.27	22.56	19.04
	Harur	28.87	28.32	42.55
	Dharmapuri	19.63	19.91	16.34
	Yercaud	20.34	20.34	...
	Salem	18.30	3.37	41.84
Coimbatore	Erode	16.35	6.86	79.31
	Coimbatore	29.84	1.07	59.11
	Udumalpet	15.88	15.08	21.61
Nilgiri	Gudalur *	44.86	(–) 48.89	...
	Ootacamund	34.51	25.38	53.22
	Coonoor	23.99	8.11	54.81
Madurai	Kodaikanal	25.99	29.14	17.54
	Periyakulam	11.96	8.66	18.59
	Madurai	18.80	(–) 7.20	32.39
Tiruchirapalli	Tiruchirapalli	13.00	8.75	15.17
Thanjavur	Sirkali	13.35	11.23	24.84
	Mayuram	13.24	13.34	12.86
Ramanathapuram	Sivaganga	13.10	14.63	5.34
	Tiruvadanai	16.48	22.18	(–) 5.89
	Paramakudi	24.79	29.92	9.23
	Ramanathapuram	16.92	14.03	24.42
	Mudukulathur	49.06	58.71	(–) 16.94
	Sattur	13.98	10.82	22.69
	Srivilliputtur	14.48	8.58	23.39
Tirunelveli	Kovilpatti	13.05	12.53	15.83
	Tirunelveli	13.71	8.53	18.09
Kanyakumari	Vilavancode	21.91	21.72	26.22
	Kalkulam	18.42	19.11	11.71
	Thovala	17.58	17.58	...
	Agasteeswaram	22.71	16.61	33.96

* Gudalur taluk of the Nilgiri district did not have urban population in 1951 and the urban population now represents persons living in areas declared as urban in 1961.

These taluks can be further sub-divided into two parts - taluks showing high increase due to comparatively high increase in rural population and taluks having high increase due to comparatively high increase in urban population. Kodaikanal of Madurai district, Sivaganga, Tiruvadanai, Paramakudi and Mudukulathur of Ramanathapuram district and Kalkulam of Kanyakumari district come under the former category. The figures are presented in Table IV-43.

Similarly a table (Table IV-44) has been prepared indicating taluks whose high increase is due to comparatively high increase in urban population during 51-61.

TABLE IV-43

Taluks showing high increase due to camparatively high increase in rurol population during 1951 - 1961

District and Taluk	Percent increase of taluk	Percent increase in rural population					
		10-19.9 (a)	20-24.9 (b)	25-29.9 (c)	30-39.9 (d)	40-49.9 (e)	Above 50 (f)
1	2	3	4	5	6	7	8
Madurai District							
Kodaikanal	25.99	..	...	29.14	...	..	..
Ramanathapuram							
Sivaganga	13.10	14.63	...	..	.		...
Tiruvadanai	16.48	...	22.18	...	.	..	..
Paramakudi	24.79	...	...	29.92	...	..	...
Mudukulathur	49.06	...	.	.	...		58.71
Kanyakumari							
Kalkulam	18.42	19.11	...	...	..	..	...

TABLE IV-44

Taluks showing high increase due to comparatively high increase in urban population during 1951-1961

District and Taluk	Percent increase in taluk	Percent increase in urban population					
		10-19.9 (a)	20-24.9 (b)	25-29.9 (c)	30-39.9 (d)	40-49.9 (e)	Above 50 (f)
1	2	3	4	5	6	7	8
Chingleput							
Saidapet	26.90	...	...	...	...	...	87.53
Maduranthakam	15.94	...	..	...	..	40.46	...
North Arcot							
Tiruppattur	14.13	.	.	...	..	44.76	...
South Arcot							
Villupuram	12.50	..	22.01	.	...	...	...
Cuddalore	16.85	...	24.72	...	...	...	...
Salem							
Hosur	20.34	...	...	29.92	...	...	...
Harur	28.87	.	...	...	...	42.55	...
Salem	18.30	..	...	..	...	41.84	...
Coimbatore							
Erode	16.35	..		...	...	...	79.31
Coimbatore	29.84	...	.	...	...	...	59.11
Udumalpet	15.88	...	21.61	...	...	...	...

TABLE IV - 44 (Contd.)

Taluks showing high increase due to comparatively high increase in urban population during 1951 – 1961

District and Taluk		Percent increase in taluk	Percent increase in urban population 10–19.9 (a)	20–24.9 (b)	25–29.9 (c)	30–39.9 (d)	40–49.9 (e)	Above 50 (f)
1		2	3	4	5	6	7	8
Nilgiri								
	Ootacamund	34.51	...	..	...	...	...	53.22
	Coonoor	23.99	...	...	..	.		54.81
Madurai								
	Periyakulam	11.96	18.59	...	.	...	...	...
	Madurai	18.80		..	.	32.39		..
Tiruchirapalli								
	Tiruchirapalli	13.00	15.17					...
Thanjavur								
	Sirkali	13.35	.	24.84	...		.	. .
Ramanathapuram								
	Ramanathapuram	16.92	.	24 42	...	. .	. .	...
	Sattur	13.98	...	22.69	..	...	...	...
	Srivilliputtur	14.48	...	23.39		...	...	...
Tirunelveli								
	Tirunelveli	13.71	18.09	-		. .	. .	...
Kanyakumari								
	Agasteeswaram	22.71	...	...	.	33 96	...	. .

Again taluks in which the growth of rural population has been comparable within 5 points with that of urban population has been exhibited in Table IV–45.

TABLE IV–45

Taluks in which the growth of rural population has been comparable with that of urban population during 1951–61

District	Taluk	Percent increase of taluk	Percent increase of rural population	Percent increase of urban population
1	2	3	4	5
Chingleput	Sriperumbudur	14.58	14.22	16 16
North Arcot	Tiruvannamalai	12.84	12.57	14.06
Salem	Krishnagiri	22.27	22.56	19.04
	Dharmapuri	19.63	19.91	16.34
Thanjavur	Mayuram	13.24	13.34	12.86
Tirunelveli	Kovilpatti	13.05	12.53	15.83
Kanyakumari	Vilavancode	21.91	21.72	26.22

It can be assumed as a general axiom that in these taluks which show increase of 25% and above, there has been immigration from outside A table (IV–46) has been presented in respect of taluks showing high increase in 1961 classified by the proportion of immigrants who have lived in the taluk not more than 10 years. It is not possible to detect any pattern of conglomeration of contiguous taluks showing high increases.

Low Increase in 1951–61

28. Madras has recorded the lowest figure of increase in the whole of India which is against the forecast made by Demographers with the single exception of the previous Registrar General of India. Along with this a controversy arose between the then Finance Minister to the Government of Madras and the then Chief Minister of West Bengal regarding Census figures of West Bengal. The cause of this controversy was not the reliability or otherwise of Census figures but was the fact that Plan allocations and allocation of the Finance Commission appointed by the Government

TABLE IV–46

Taluks showing high increase in 1961 classified by the proportion of immigrants who have lived in the taluk not more than 10 years (for rural areas only)

Districts and taluks arranged in descending order of percent increase		* Percent increase in 1951-1961	Percent of migrants to total population of taluks who have been born (a) Within the same district	(b) Outside the district but within the same State	(c) Outside the State +	Percent of rural immigrants to rural population
1		2	3	4	5	6
Ramanathapuram	Mudukulathur	58.71	7.05	0.76	0.10	12.33
	Paramakudi	29.92	8.48	0.24	0.17	16.89
Madurai	Kodaikanal	29.14	17.80	1.79	0.25	25.85
Salem	Harur	28.32	13.57	1.12	0.16	24.61
Nilgiri	Ootacamund	25.38	7.58	26.37	7.59	52.89

* Rural increase only

+ Includes the persons born in other countries

of India from time to time would be based on the population of different States in India. This has in turn resulted in some controversy regarding the reliability of the figures of Madras State. It has not always been constructive. Strangely enough, the Registrar General's first reaction to the low growth rate in Madras when compared with the All-India average was to the effect that it was a little baffling Both Assam and Bengal have recorded figures far in excess of what can be normally expected and which can only be explained by unusually large migration from the adjoining Pakistan.

For a realistic appreciation of the criticisms levelled against the count in Madras State, it is necessary to refer in brief to those allegations which are found in unpublished papers circulated by bodies like Central Statistical Organisation. They are indicated below.

Central Statistical Organisation's review of provisional totals

29. The Census totals for all States except for Uttar Pradesh, Andhra Pradesh, Madras, Mysore and Kerala are on the higher side as compared to the projected figures. Among the major States showing a higher figure in the Census, the States of West Bengal (+15.1%), Madhya Pradesh (+7.8%), Assam (+7.63%), Orissa (+5.9%) show a difference of over 5%. Out of the States in which the Census figures fall short of the projected figure only Madras (−6.92%) shows a difference of over 5%; the other States viz. Andhra Pradesh (−3.42%), Mysore (−2.08%), Kerala (−1.66%) and Uttar Pradesh (−0.69%) reveal a difference of a lower order. The estimates are worked out on the basis of ratio method which was not very sensitive in the case of small States and which would be inapplicable to even major States as will be seen from the Statement given below :—

TABLE — 1

Statewise population census figures as compared with the projected figures for 1961 (As on 1st March 1961) (Figures in millions)

State	Census	Projection	Variation Col. (2)–Col. (3)	% Difference (using Census figure as the denominator)
1	2	3	4	5
Andhra Pradesh	35.98	37.21	-1.23	-3.41
Assam	11.86	10.96	+0.90	+7.59
Bihar	46.46	44.99	+1.47	+3.16
Bombay	60.11	59.34	+0·77	+1.29
Maharashtra	39.50	39.34	+0.16	+0.41
Gujarat	20.62	20.00	+0.62	+3.01
Kerala	16.88	17.16	—0.28	—1.66
Madhya Pradesh	32.39	29.86	+2.53	+7.81
Madras	33.65	35.98	—2.33	—6.92
Mysore	23.55	24.04	—0.49	—2.08
Orissa	17.57	16.53	+1.04	+5.02
Punjab	20.30	19.80	+0.50	+2.46
Rajasthan	20.15	19.63	+0.52	+2.58
Uttar Pradesh	73.75	74.26	—0.51	—0.69
West Bengal	34.97	29.69	+5.28	+15.10
Delhi	2.64	2.51	+0.13	+ 4.92
Himachal Pradesh	1.35	1.16	+0.19	+14.07
Jammu & Kashmir	3.58*	5.31**	..	..

*Excluding areas occupied by Pakistan

**Population for the whole territory of Jammu and Kashmir including Pakistan held areas

In Madras the growth rate has recorded a surprising decline when compared with 1951. Another point of criticism was the wide divergence in 1951—61 growth rate between the rural and urban areas. While urban growth is 22.9% rural growth comes only to 8%. This rural growth is less than the growth in the contiguous States of Andhra Pradesh, Mysore and Kerala with 15.7%, 22.8% and 21.8%. A comparison with contiguous districts of adjoining States is given in Table II

TABLE II

Comparative study of population growth rates in certain districts of Madras which are contiguous to districts in adjoining States (1961 Census)

Districts of Madras	Growth Rate	Contiguous Districts of	Growth Rate
		ANDHRA	
Districts		Districts	
Chingleput	12.03	Nellore	13.34
North Arcot	8.36	Chittoor	14.82
		MYSORE	
Salem	13.51	Kolar	14.28
Coimbatore	12.27	Bangalore	17.80
Nilgiri	31.34	Mysore	17.29
		KERALA	
Madurai	10.83	Palghat	13.44
Ramanathapuram	16.29	Kozhikode	26.82
Tirunelveli	8.96	Kottayam	30.34
Kanyakumari	20.63	Alleppey	18.95
		Quilon	30.93
		Trivandrum	30.90

The rural growth rate as estimated by National Sample Survey in its 14th round (reference July 1957—July 1958) comes to 20.58 per 1,000 (or 20.58% over a period of ten years). This piece of external evidence has made the Central Statistical Organisation bold enough to challenge the low growth rate for rural Madras revealed by the Census count. Unless there has been wholesale migration from rural areas, its abnormal low growth rate of 8% for the decade appeared to be doubtful. Somewhat hasty, the reasonable conclusion according to the Central Statistical Organisation, was that the Census machinery did not function satisfactorily in the rural areas of Madras State. ... ..

Planning Commission's evaluation

30. I have seen another note prepared by the Planning Commission on the population count. In respect of Madras State all that is stated in that study is the rate of growth during 1951-61 in rural areas namely 8.14% is (1) less by about 15 points in comparison with the growth rate in urban areas-22.91; (2) less than in contiguous States of Andhra Pradesh where it is 15.69, Kerala (21.84) and Mysore (22.84) and (3) less than the National Sample Survey 14th round estimated figures of 20.58%. Fortunately the view that the Census machinery did not function satisfactorily in rural areas was not accepted by this critic. The difference between rural and urban growth in 1951-61 was 14.77. It has to be recalled that the difference in the corresponding two growth rates at earlier Censuses was also pretty high and in fact it was even larger with 26.8% at the last immediately preceding Census.

MADRAS—South Division*

	Rate of growth 1941-51	1931-41	1921-31
Rural Areas	7.4	9.1	5.5
Urban Areas	34.2	20.0	20.4
Difference	26.8	10.9	14.9

* Census of India, 1951—Vol. III—Madras & Coorg Part I Report, pages 61, 77, Tables 2.3 and 3.3 columns 12, 13 and 14.

"In a sense, the differential between rural and urban growth rates would not *per se* cast any doubt on the breakdown of the Census machinery. Indeed this parameter assumed very different values in the adjoining States as may be seen from the following Statement.

RATES OF GROWTH DURING 1951—1961

	Rural	Urban	Difference
Kerala	21.84	42.44	20.60
Mysore	22.84	16.41	(—) 6.43
Andhra Pradesh	15.69	15.13	(—) 0.56

(Source: Registrar General's Report for 1961)

In respect of (2), it may be observed that in no decade since 1921-31 did the rural areas of the Madras Deccan and Northern Divisions (which roughly correspond to the major part of present Andhra Pradesh) and Bellary and South Kanara districts (which are now merged in Mysore State) nor even Malabar district (which is now included

in Kerala State) record such high rates of growth either absolutely or even relatively to the overall growth rates of the respective decades, as will be seen from the Table below (Source: marked* above pages 61 and 77.)

GROWTH RATES IN RURAL DISTRICTS

Area	Roughly corres-ponding to present	Period 1941-51	1931-41	1921-31
(Original Madras)				
Southern Division	Madras	7.4	9·1	5.5
Northern Division	Andhra Pradesh	8.7	8.9	11.2
Deccan Division		8.7	6.9	9.8
Bellary District	Mysore State	12.4	5.6	10.8
South Kanara District		9.4	9.6	8.1
Malabar District	Kerala	17.8	8.6	13.0
All India overall (rural and urban growth rate)		13.34	14.23	11.00

In passing, it may be observed that the Southern States, roughly south of 180 or 200 North Latitude have always shown comparatively low rates of growth and on many occasions since the "great divide" of 1921 lower than the All-India average rates. The following statement (copied from Registrar General's report for 1961 page. 5) may be relevant here

GROWTH RATES

Area	Period 1921-31	1931-41	1941-51	1951-61
All India	11.00	14.23	13.34	21.49
Present Madras	8.52	11.91	14.66	11.73
Andhra Pradesh	12.99	12.75	14.02	15.63
Kerala	21.85	16.04	22.82	24.55
Mysore	9.38	11.09	19.36	21.36

Further in these States alone the 1961 Census counts have registered lower figures than the projection estimate obtained by Central Statistical Organisation namely

State	Variation Absolute millions	Percentage
Madras	2.33	6.92
Andhra Pradesh	1.23	3.41
Kerala	0.28	1.66
Mysore	0.49	2.08

An exception however exists with Uttar Pradesh showing a Census under-estimate of 0.51 million and 0.69 percentage, but this order of difference may be explained away by the pulls and thrusts of neighbouring States.

Referring to migration it may be pertinent to observe that Madras State is an "exporting" State. The figures noted below indicate that roughly 4% of the natural growth was wiped away by outflow migration at 1931 and 1951.

MADRAS STATE (1951 BOUNDARIES)

	Census of 1951	1931
Immigration	532,455	257,628
Emigration	2,983,837	2,092,000
Outflow	2,451,382	1,834,372
Recorded population	57,016,002	44,649,483
Natural population	59,467,384	46,483,855

At the same level of "exportation", about 1.2 millions of Madras State may have gone out."

V. K. R. V. Rao's analysis

31. "One hopeful factor is the consistency with which Madras has fallen in inter-state ranking in terms of percentage increase in population from the 10th place over the entire period to the 13th place in 1931-61 and now to the 14th place over the last census decade of 1951-61. The rate of increase in 1951-61 is only 11.7% which is practically half of the national average. With increasing electrification of rural areas in which Madras is far ahead of other Indian States, good prospects of widespread economic development and the adoption of an enlightend and vigorous policy of population control, Madras presents a less dismal picture from the demographic point of view than do the other areas of equally high or higher density."

Comparative study of the Growth Rate

32. Sri R. A. Gopalaswami, Registrar General, India in 1951 has called 1921 as the "great divide" in Indian population. Large scale famines and epidemics which kept the population at subnormal level during 1901-10 and 1911-20 disappeared with the new technique of control of famines and epidemics. The growth rate was stabilised for the decades. 1921-30, 1931-40 and 1941-50 at 11, 13.5 and 14 for India. The release

of the results of the first sub-round of the 14th National Sample Survey Round showed a rate of natural increase of 1.9% per annum. This was a forerunner to the revision of the view held by Planners that the population growth of India would stabilise at 13.3 during 1961-70 and at 14% during 1971-80. The Census of 1961 showed a growth rate of 21.5%. Table below reproduces the decennial State growth rates for the whole of India.

	States	Total Census population in millions	GROWTH RATES 1921-30	1931-40	1941-50	1951-60
1	Andhra Pradesh	36.0	13.0	12.8	14.0	15.7
2	Jammu & Kashmir	3.6	10.1	10.4	10.4	9.4
3	Madras	33.7	8.5	11.9	14.7	11.9
4	Uttar Pradesh	73.7	6.7	13.6	11 8	16.7
5	Assam	11.9	19.5	20.1	10.3	34.5
6	Bihar	46.5	11.5	12.2	10.3	19.8
7	Madhya Pradesh	32.4	11.4	12.3	8.7	24.2
8	Orissa	17.5	11.9	10 2	6.4	19.8
9	Gujarat	20.6	12.9	19.3	18.7	26.9
10	Kerala	16.9	21.9	16.0	22.8	24.8
11	Rajasthan	20.2	14.1	18.0	15.2	26.2
12	Maharashtra	39.6	14.9	12.0	19.3	23.6
13	Mysore	23.6	9.4	11.1	19 4	21.6
14	Punjab	20.3	9.6	16.0*	1.8*	25.9
15	West Bengal	34.9	8.1	13.7*	22.4*	32.8
	All India	439.2	11.0	13.5	14.0*	21.5

* Corrected for estimated inflation in Punjab and West Bengal in 1941 Census

A comparative study of the rates will be interesting. The growth rate has varied from State to State and from decade to decade. Growth rates around 20% were recorded by Assam and Kerala in 1921-30, by Assam, Gujarat and Rajasthan in 1931-40 and by Gujarat, Kerala, Maharashtra, Mysore and West Bengal in 1941-50. The main shift in 1951-60 has been that this rate was recorded by each State with the exceptions of Jammu and Kashmir, Madras, Andhra Pradesh and Uttar Pradesh. Not only this, 8 States recorded much higher rates around 25. In 1951-60, most of the States experienced a population boom. At no stage did the population increase of Madras State exceed 15%. Uttar Pradesh contributes 1/6th of the population with Bihar contributing 1/10th. Andhra Pradesh, Madhya Pradesh, Madras, Maharashtra and West Bengal form the next group each having a population around 35 millions. They contribute about 300 millions of the population of India. Gujarat, Mysore, Punjab and Rajasthan have a population of 20 millions each. Kerala and Orissa have a population of 17 millions each. At the lowest level are Assam with 12 millions and Jammu and Kashmir with $3\frac{1}{2}$ millions. Thus certain States like Uttar Pradesh and Bihar have a dominant position in determining the population trend. Still a study of the trends in individual States is useful in understanding the possible developments of future. The decade 1911-20 witnessed the influenza epidemic. Population of most of the States declined during the decade and the remaining ones recorded a small growth rate. Assam was the only one which showed 19% rate of growth which was maintained in the subsequent decades with slight increases. In 1951-60, the rate of growth shot up to 34.5%. During any decade since 1901 Assam has the distinction of maintaining one of the highest growth rate recorded by the States. Similarly Jammu and Kashmir has throughout recorded one of the lowest decennial growth rate closely around 10%. In between these two extremes fall other States. Madras, Andhra Pradesh and Uttar Pradesh have uniformly retained a low level during the last four decades. The last two recorded a slightly higher rate during 1951-60, but Madras reverted to 1931-40 level after showing a slightly higher rate during 1941-50. The next group comprising Madhya Pradesh, Bihar and Orissa shows the feature that during the previous three decades, growth rate was on the low side. It got a spurt only in 1951-60. The group consisting of the remaining 7 States showed clear indications of high growth earlier than 1951-60 and it is this group that recorded sharp increases during the last decade 1951-60. Kerala's growth rates have throughout been at the highest and steady level. The same is true of Gujarat and Rajasthan with the modification that in 1951-60, they recorded sharper increases. The remaining States of Maharashtra, Mysore, West Bengal and Punjab show an increasing trend in the decennial growth rates with greater spurts during the last two decades. The low growth rate in Punjab in 1941-50 is due to mass exodus of population on Partition. It has been estimated that the State growth rate would have been 20.7 if there be no

such abnormal disturbances. Registration rates themselves suggest a growth rate of natural increase of 15.6. States are administrative units with distinct social, cultural and economic pattern. As such the pattern of growth will vary from region to region. A major shift in the State growth pattern during 1901 to 1960 has been that initially most of the States registered low growth rates, but during the last decade 1951-60, many more shared the high growth rate. Only Jammu and Kashmir and Madras and to some extent Andhra Pradesh and Uttar Pradesh had rates on the low side. The largest State of Uttar Pradesh registered only a modest growth rate of 16.7% during 1951-60.

Generally, a discussion on the components of population is divided into three heads—fertility, mortality, and migration. The last one has been assumed to be an insignificant factor in the State growth, but this cannot apply to Madras State as will be shown later. Natural increase which represents the excess of birth rate over death rate practically accounts for the whole of the observed rate of population growth.

Possibilities of omission in enumerating houses and precautions taken

33. That Madras would record an abnormally low increase was a surprise to me also. The houselisting conducted in October, 1960 recorded an increase of 9.1%. Considering the efficiency of the Revenue Organisation in Madras State, it was unlikely that the actual Census count would produce a striking variation as was the case in some other States in India. The increase of 9.1% was much less than what was anticipated by demographers when compared with the increase of 14.7% during the previous decade 1941-51 assuming that no variable factor has affected the growth rate during 1951-61. Two constructive criticisms were made about the houselisting operation by two eminent persons, one by Sri R. A. Gopalaswami, the then Chief Secretary to the Government of Madras and the previous Registrar General, India and the other by Sri A. Mitra, the present Registrar General. The view of Sri Gopalaswami was that there might be an under-count of population during houselisting, more so in the rural sector of the State. A somewhat different approach was made by Sri A. Mitra. He pointed out that the decade 1951-60 was free from causes that would contribute to such a reduction viz., 14·7% to 10% which according to him, would be the figure for 1951-61, based on the increase in houselisting population. But, on the other hand, due to improvement in public health conditions, one would expect some rise when compared with the last Censuses. This trend was reflected in the houselisting figures recorded in other States of India where the increase was as high as 20% or more. He, therefore, suggested that I should examine in detail whether the figures were reliable and whether there would be any loophole in the adoption of the already existing house-numbering system by which some of the houses might have been omitted from listing. He thought that, though such a thing could not have happened, it would be desirable to have a careful and thorough check-up with the help of the Deputy Superintendents of Census Operations and see that all the houses have been completely listed and that, at the enumeration stage, all the houses were completely covered. These criticisms made me take extra precautions in conducting the Census count.

The rural population of Madras State has recorded as good an increase in 1951-61 as it had during 1941-51, the rate being 8.4% as against 8.1%. As such, there is no fall in the rate of growth. Considering the trend in migration which has been exhibited in Madras State both in the rural and urban sectors in the decade 1951-61 which will be discussed later and considering that there is no appreciable variation in the rate of growth based on births and deaths, the increase in the rural sector can be said to be quite reasonable. In the urban sector, the increase was 22·59%. No possibility of omission existed because a definite provision was made in the houselisting that, whenever a house has not been given a number, it should be marked as "X" and enumeration completed. Further, the working of the house-numbering system cannot be given as the reason for the fall in the urban population because the population increase has differed from town to town. In some cases, a substantial increase has been recorded while, in others, a marked fall has been recorded. The following examples will be illustrative :—

Town	*% Variation 1951-60*
Coimbatore	34.6
Salem	20.5
Erode	21.3
Tiruppur	34.2
Ootacamund	12.3
Madurai	13.9
Dindigul	15.5
Tirunelveli	15.4
Tuticorin	21.1
Nagercoil	24.5
Vellore	(–) 2.3
Thanjavur	(–) 1.3
Kumbakonam	(–) 6.1
Nagapattinam	(–) 4.7

These figures will substantiate the point that the fall in urban population cannot be attributed to any general cause like omission of household. The instructions issued in this connection to the enumerators will be of interest. "The point to be remembered is whether the Enumerator is able to see the house-numbering or not, houses which do not exist actually on ground should be omitted and all houses which existed on ground whether they are numbered or not, should be enumerated. In actual census, we are not directly concerned with house-numbering in the State. We are concerned with the existing number of houses used by the people to live". Actually, the possibility of omission under houses can take place more in the urban area, while the criticism against the Madras Count has been mainly directed against the rural sector. It was, however, my good fortune that I was able to instruct the charge officers to re-check the house-numbering and see that no household was omitted from the count. The Deputy Superintendents of Census Operations were also directed to check the houselisting with actual conditions prevailing on ground and to see that no omission took place. It was enjoined on them that whether a building had a number or not was of no material importance for Census enumerators.

A circular letter to all charge officers indicating what should be done to make the enumeration accurate was issued by me, which is reproduced below :-

"I am addressing this personal letter to you with the hope that you will attend to its contents with all seriousness.

It is quite necessary that the figures of population which we furnish for the Madras State for the enumeration of 1961 should be as accurate as possible. I am confident that you will normally take every step required to see that an accurate return of the population is made. But there are certain aspects of this question which you have to keep in mind. According to the houselisting, which we have conducted in October, 1960, we find that the population of Madras State has increased only by 9.1% for the period 1951-60. The figures for the corresponding period 1941-51 was 14.7%. There is a general impression that the variation during the decade 1951-61 should not normally show any decrease over the variation during decade 1941-51. This is based on the following considerations. No serious epidemic or famine conditions have occurred after 1951. Normally, owing to the increase in Public Health activities, death rate should have fallen for the decade. Birth rate can be taken to be the same as the last decade. As such, the same increase or a little more is expected. This is the view held by Demographers. It is necessary to keep this in mind and to attend to the enumeration after taking care to see that no household is omitted from enumeration and that there is no under-count of any household. For this purpose, a complete re-check of the houses and households in your jurisdiction will be necessary.

As a result of the analysis in my office, we find that the rural population of the State has maintained the same increase during 1951-60 as in 1941-51. As such, it is necessary for you to concentrate more on the urban areas which have recorded a substantial fall in the rate of increase.

It is not my intention that any attempt should be made by you to increase the count of population of the State. What is necessary for you is to satisfy yourself that the count is accurate and we are returning by February 1961 the actual population of Madras State. Whether any over-count has taken place in 1951 or not will not be our concern at this stage.

I will be happy if I can secure your co-operation in making an accurate return of the population of Madras State in 1961."

I have discussed this to indicate that the possibility of a short fall in count was kept in my mind during enumeration and everything possible

was done to improve the count and to guard against the possibility of under-enumeration.

Factors governing population growth

34. The three factors affecting population growth are fertility, mortality and migration. For an understanding of the growth picture of Madras State it is useful to examine each of these factors separately and assess their impact on the growth pattern. In my approach to this analysis I have made use of the concept of 'mean growth rate' instead of the commonly employed concept of 'percentage variation', since the former lends itself to analysis through the following equation:

Mean annual growth rate = Mean annual birth rate - Mean annual death rate + Mean annual net migration rate

In the right hand side, a positive migration means an excess of in-migration over out-migration and *vice versa*.

The data for application in this equation, known in demographic parlance as the balancing equation are available from Vital Statistics, but their value is limited due to the inaccuracies in the basic data, but it is nevertheless of value to use them with certain reservations. For purposes of comparison, I have given below the figures for 1951-60 and 1941-50.

TABLE IV-47

Growth rate and natural increase rate in 1941-50 and 1951-60.

Year		Growth rate	Birth rate	Death rate	Natural increase rate	Growth rate *minus* Natural increase rate
1		2	3	4	5	6
1951-60	T	11.2	27.1	14.2	12.9	— 1.7
	R	8.2	24.4	13.4	11.0	— 2.8
	U	20.6	35.7	16.7	19.0	+ 1.6
1941-50	T	15.4	30.2	20.4	9.8	+ 5.6
	R	10.2	29.5	20.0	9.5	+ 0.7
	U	35.1	33.1	22.2	10.9	+ 24.2

It appears that the difference between the growth rate and natural increase rate is negative in 1951-61 as against a positive difference in 1941-51. This difference itself depends upon a number of factors viz. the extent of under-registration of births, deaths and also the nature and extent of net migration. We may now examine each of the factors separately.

Birth Rate

35. (a) The registered birth rate of 27.1 appears to be under-registered to a considerable extent. An examination of the talukwise vital statistics shows that out of the 103 taluks only 13 taluks can be considered to have 'better' registration in 1961 and out of the 268 towns (municipal as well as non-municipal) only 107 have 'better' registration. I have put better within inverted commas for the simple reason that they are not the best and they are only relatively better. The procedure adopted by us in delineating such areas and the vital statistics of these areas are discussed in greater detail in Part I-B of the Census Report. But for the purpose of this discussion here we may confine overselves to the results of our analysis. I found that the birth rate after 'weeding' was of the order of 42, but I also found that there was a high degree of inflation of birth rate in several towns due to what I would call 'hospital migration', viz. births occurring to non-residents in the hospitals of these areas. After accounting for this factor, I find a birth rate of 35 for the municipal areas. The birth rate for the rural areas after weeding worked out to only 31.4, but I have reasons to think that even in the 'better' registered rural areas there is some amount of omission in registration of births and the true birth rate for the rural areas should be somewhat higher.

(b) The Reverse Survival Method of estimation of birth rate gave a figure of 35 for the decade 1951-60. Sri S. P. Jain has arrived at the birth rate independently by a slightly different procedure and his estimate is also identical with ours.

(c) The birth rate for 1941-50 arrived at earlier was 35 and I have hardly any reason to expect a large decline in the birth rate during last decade. The Family Planning Survey carried out by us in Madras City has shown that the practice of family planning is even today limited to negligible proportion of population and the impact of family planning is likely to be much less in rural areas.

It appears that a birth rate of 35 can be accepted as the correct position. An examination of several evidences such as child-woman ratio and fertility survey data have revealed little rural-urban differential in fertility. Kingsley Davis has also observed that in India urbanisation has not taken place to such an extent as to cause a sizable reduction in fertility in urban areas. Our social structure has not changed to such an extent as to cause any serious change in fertility. Our towns are only magnified villages, exhibiting several superstitions, taboos etc. on an even larger scale that hardly can one expect this to influence fertility change. However, mention may be made of one important factor which has contributed to fertility change. This is the age at marriage and it has certainly shown an upward trend as may be seen from the following figures.

Mean age at marriage in Madras, 1891–1961

Year	Males	Females
1891	23.21	14.41
1931	22.06	14.92
1941	23.36	16.13
1951	23.58	17.18
1961	25.15	18.14

The rise in the age at marriage of females has been steady and is roughly one year in a decade. I may now examine the rural and urban mean marriage age in 1961.

Mean marriage age for

	Males	females
Rural	24.8	18.0
Urban	25.9	18.7

While the difference in the age at marriage is real, I have not been able to find any rural-urban differential in the fertility rate from the Fertility Survey data and this is due to the fact that the postponement of marriage is compensated by a higher fertility performance in urban areas in the early years of married life.

Death Rate

36. The death rate is more difficult to comprehend than the birth rate. While one cannot expect any change during the last decade in the birth rate, it is difficult to visualise the extent of variation in the death rate. In the past the death rate has declined quite fast and one is apt to make the assumption that the decline should have continued at the same rate. The registered death rate of 14.2 for the decade 1951-60 as against 20.4 for 1941-50 seems also to indicate such a trend. However, a little further examination reveals a different picture.

(a) By using a quasi stable population model, Sri S. P. Jain has estimated that the death rate of Madras State in 1951-60 should be of the order of 22 per 1,000 as against a birth rate of 35 per 1,000. In the above procedure, the migration factor has not been properly accounted and therefore it appears that a death rate of 22 for Madras State is somewhat on the high side.

(b) The death rate for municipal areas and Census towns after weeding is found to be 19.5 for 1951-60. By a similar procedure I found the death rate for rural areas in 1961 to be 18 and the death rate for 1951-60 is bound to be higher.

(c) The accepted death rate for 1941-50 is 23 per 1,000 as against the registered rate of 20. The mortality picture of Madras State has not undergone any drastic change on the scale it has happened in the rest of India. The reasons are not difficult to find. Firstly, malaria has been practically eradicated even at the beginning of the decade itself and little could be done or was left to be done in this sphere. Secondly, the experience of several countries like Ceylon has clearly shown that after a certain stage, further reduction in mortality is harder to attain. Therefore, it is likely that the reduction in mortality could not be considerable in the last decade.

The above considerations have shown that a death rate of 20 per 1,000 for the 1951–60 decade can be accepted.

Migration

37. The next question is about the nature and extent of migration. Once the growth rate is accepted and the birth and death rates also agreed upon it is easy to settle migration. Substituting in the following balancing equation:

$$GR = BR - DR + MR$$

a growth rate of 11 and the birth and death rates of 35 and 20 respectively I get a migration rate of —4 per 1,000 per annum or 4% out-migration in a

decade. Tracing my argument backwards if I get a migration rate of 4%, I should be able to explain the Madras growth rate of 11.87 for 1951-60.

(a) Even though the place of birth statistics of the 1961 Census does not explain more than 2% out-migration, I have reason to believe that the place of birth statistics considerably underestimates out-migration of Madrasis, probably because of a tendency of the Madrasis who have migrated outside to identify themselves with the local population. The language returns seem to confirm this picture.

(b) Sri R. A. Gopalaswami's projections for 1961 (with due adjustments for reorganisation) give a population estimate for 1961 close to the Census figure. The estimates of migration derived by a comparison of the enumerated population with the population projections for 1961 attempted by Sri K. E. Vaidyanathan indicates a net out-migration of 4% in the decade 1951-61.

(c) The Census Survival Ratio Method which is perhaps the best method available under Indian conditions gives a net out-migration of 4% as against a net in-migration of 2% in the earlier decade. I have, therefore, come to the conclusion that the migration should have contributed to a diminishing of the population by 3% which was compensated by a natural increase of 15% leading to a net growth rate of 12%.

Comparative levels of accuracy of 1951 and 1961 Censuses

38. Soon after the Census results were published there was some criticism that the 1961 Census has suffered considerable under-enumeration. I have examined this carefully and come to the conclusion that there is little evidence to justify this criticism. The following are my reasons:

Soon after the 1961 Census Operations were completed, a post-enumeration check was carried out and this revealed an under-count of only 0.9%. Those who are familiar with the Census enumerations of the West will realise that an under-count of 1 to 2% is not uncommon even in the most advanced countries. Judging from these standpoints, I am of the opinion that the Census machinery has functioned alright during the 1961 Census.

Usually omissions in enumeration occur in the age-group 0-4 and particularly in the age-group 0-2. The reason for this is that infants and small children escape the notice of the enumerators and when the parents do not consider them important enough to be enumerated. Therefore, a test of efficiency of a Census is the extent of omissions in the age-group 0-4. By the Reverse Survival Method, I have found that the efficiency of enumeration of the 0-4 group in 1961 is better than the corresponding position in 1951. (For more details see Part I-B of the 1961 Census Report).

Statutory Rationing and the Census of 1951

39. One factor which has affected the population count in 1951 is the existence of statutory rationing in urban centres. This took the form of bogus card holders which was specially marked in Calcutta City. The result was Calcutta has recorded an unusual low figure of increase among the cities in India in 1951-61. Similarly bogus card holders existed in Madras City to a great extent and in other important cities to a lesser extent. This question was discussed in 1951 by the Registrar General, India and the Superintendent of Census Operations, Madras State in consultation with the Civil Supplies authorities. An attempt was made to root out the bogus ration card holders which was an administrative problem. But in the demographic field, the existence of bogus card holders would naturally tend to inflate the population because the tendency during enumeration to justify the number of card holders could not be resisted, especially when the Census was taken by the officials of the Government. It is not my purpose to indicate to what percentage this would inflate the figures of 1951, but it will be sufficient to show that any high inflation of figures of 1951 will result in a fall in the figures of 1961.

Other factors

40. Another aspect of the problem is the existence of procurement in certain wet areas of the State like Thanjavur, Tiruchirapalli and Tirunelveli. The existence of procurement with

whatever was left with the household depending on the number of members in the family will therefore lead to an inflation of figures in a producing household. More so because the procuring agency coincided with the enumerating agency that would in particular tend to inflate the population of these areas. Remarkably enough in 1961, the fall in growth in the rice producing areas of Madras State was more marked than in other areas of the State. Actually Thanjavur and Tiruchirapalli have recorded less than 10% increase in the State. It is not my purpose to measure precisely what could be the over-enumeration in 1951 on account of these factors.

The third factor working against an accurate count in 1951 is the existence of rivalry in Madras City between the Tamil and Telugu people claiming these areas as their own. In the course of my discussion on migration, I will be showing that Madras has lost more than 3 lakhs of people between 1951 and 1961. This will be to some extent due to the break-up of Madras State consequent on the formation of Andhra Pradesh. But the possibility cannot be ruled out that the figures of Tamils and Telugus have been inflated in 1951. Such a situation has happened in Punjab and West Bengal in 1941 when Hindus and Muslims vied with each other in over-reporting in 1941 Census. To some extent Madras has also recorded a fall in the number of Telugu speaking people. The purpose of this discussion is to show that some unreal factors existed in 1951, so that percentage increase during the decade 1941 - 1951 cannot represent the normal pattern of population growth in Madras State. Fourth is the possibility of the return of a number of migrant population in Madras State owing to unsettled conditions created by World War II. It is generally agreed that a number of persons are found in Burma, Malaya and other places occupied by Japanese during 1941-51. A number of families were unsettled and they returned and settled in different parts of the Madras State. This possibility is highlighted by the observations made by the Census Actuary of India that the survival ratio method revealed the over-enumeration of 2% in Madras in 1951. This would indicate the possibility of persons returning to Madras State during that decade.

The possibility of an over-count in 1951 is indicated by the independent approaches for working out the death rate for 1941-51 and 1951-61.

Sri S.P.Jain attempted the Differencing Method of estimating death rate for 1941-50 and got into difficulties. I may recall the following remarks of S.P.Jain in Census of India, Paper No. 6, 1954:

"It will be observed that the computed death rates for Madras, Bombay and Punjab viz., 19.1, 21.3 and 18.2 respectively are lower than the registered death rates which are 20.6, 22.6 and 23.9 respectively.

In the case of Madras, the registered deaths at ages 5 and over during 1941-50 are 6,687,300 whereas the difference between 1941 population and 1951 population aged 10 and over, enumerated in Madras is 6,482,638. The value of the difference seems to be comparatively low, when it is considered that theoretically it should be higher still in view of the net emigration brought out by the available figures and the fact that the registered deaths do not cover the entire State. During 1941-50, there was no registration of births and deaths *in certain small areas, viz.*, Visakhapatnam and Srikakulam Agencies and the newly merged areas of Banganapalli, Sandur and Pudukottai except for the period after 1949 when the births and deaths in the three merged States were included in the registration data. A low value of the difference *may possibly arise due to* (a) a comparatively more complete enumeration in 1951 Census and or, (b) a substantial fresh net immigration in place of net fresh emigration as brought out by the estimate of migration figures, which at the best is the result of an intelligent guess. As regards(a), while it is difficult to say how far this factor has been operative, it may be stated that a difference of ½% increase in the efficiency of enumeration would make a difference of 2 lakhs nearly." I have independently attempted a similar differencing approach. I get a death rate of 27 per 1,000 if migration is ignored. Even if I allow for a 4% out-migration in a decade, I get a death rate of 23 per thousand which appears to be on the high side. The anomaly arising from the above argument and the argument of S.P. Jain for 1941-51 leads to the possibility of an over-count in 1951.

TABLE IV-48

Census population and ration card population in Statutory ration areas in 1951

Name of area	Census population	Ration card population	Difference
1	2	3	4
CHINGLEPUT DISTRICT			
Chingleput	22,667	20,200	...
Kanchipuram	85,045	80,938	...
Madras Suburban area	...	...	...
Tiruvallur	18,862	19,468	+ 606
COIMBATORE DISTRICT			
Coimbatore	194,555	205,265	+ 10,710
Dharapuram	24,206	24,074	...
Erode	57,527	54,256	...
Mettupalayam	26,655	27,691	+ 1,036
Pollachi	41,850	41,716	...
Tiruppur	52,597	52,388	...
Udumalpet	23,366	23,264	...
Gopichettipalayam	30,393	30,077	...
MADRAS DISTRICT			
Madras City	1,429,985	1,594,489	+ 164,504
MADURAI DISTRICT			
Bodinayakanur	35,936	32,644	...
Dindigul	78,654	78,324	...
Kodaikanal	10,946	10,339	...
Madurai	361,954	376,641	+ 14,687
Periyakulam	31,012	30,884	...
Palni	34,492	32,788	...
NILGIRI DISTRICT			
Coonoor	23,925	22,862	...
Ootacamund	41,414	38,274	...
NORTH ARCOT DISTRICT			
Ambur	40,501	46,109	+ 5,608
Gudiyatham	45,708	45,286	...
Tiruppattur	27,007	26,476	...
Vaniyambadi	38,694	36,708	...
Vellore	106,603	109,646	+ 3,043
Walajapet	12,586	13,025	+ 439
Tiruvannamalai	40,268	38,590	...
RAMANATHAPURAM DISTRICT			
Aruppukkottai	48,650	46,818	...
Devakottai	26,315	26,570	+ 255
Karaikudi	37,867	27,025	...
Sivakasi	22,819	23,340	+ 521
Srivilliputtur	40,487	37,631	...
Rajapalayam	60,917	56,843	...
Virudunagar	46,456	44,125	...
SALEM DISTRICT			
Salem	202,313	196,158	...
Rasipuram	23,133	23,025	...
Mettur	...	...	...
SOUTH ARCOT DISTRICT			
Chidambaram	34,575	33,613	...
Cuddalore	68,394	70,548	+ 2,154
Villupuram	35,826	35,664	...
Tindivanam	29,622	30,258	+ 636
TIRUCHIRAPALLI DISTRICT			
Karur	42,128	40,001	...
Pudukottai	44,565	46,525	+ 1,960
Tiruchi-*cum*	218,565	226,069	+ 7,504
Srirangam	36,846	36,695	...
TIRUNELVELI DISTRICT			
Tirunelveli-*cum*	73,500	69,538	...
Palayamcottai	39,911	37,183	...
Melapalayam	37,663	...	...
Tuticorin	98,391	90,559	...
Kovilpatti	32,885	30,839	...

TABLE IV - 49

Houselist population and final population — Percentage variation

District	Total: Houselist Population	Total: Final Population	Total: Percentage variation	Rural: Houselist Population	Rural: Final Population	Rural: Percentage variation	Urban: Houselist Population	Urban: Final Population	Urban: Percentage variation
1	2	3	4	5	6	7	8	9	10
Madras	1,618,477	1,729,141	+ 6.84	...	...	...	1,618,477	1,729,141	+6.84
Chingleput	2,130,945	2,196,412	+ 3.07	1,697,951	1,740,734	+2.52	432,994	455,678	+5.24
North Arcot	3,060,285	3,146,326	+ 2.81	2,471,078	2,515,101	+1.78	589,207	631,225	+7.13
South Arcot	3,002,199	3,047,973	+ 1.52	2,630,914	2,655,651	+0.94	371,285	392,322	+5.67
Salem	3,745,495	3,804,108	+ 1.56	3,145,318	3,186,760	+1.32	600,177	617,348	+2.86
Coimbatore	3,416,254	3,557,471	+ 4.13	2,446,464	2,525,302	+3.22	969,790	1,032,169	+6.43
Nilgiri	386,112	409,308	+ 6.01	221,669	229,441	+3.51	164,443	179,867	+9.38
Madurai	3,123,244	3,211,227	+ 2.82	2,148,656	2,195,482	+2.18	974,588	1,015,745	+4.22
Tiruchirapalli	3,098,777	3,190,078	+ 2.95	2,463,148	2,512,007	+1.98	635,629	678,071	+6.68
Thanjavur	3,148,899	3,245,927	+ 3.08	2,526,396	2,584,407	+2.30	622,503	661,520	+6.27
Ramanathapuram	2,430,502	2,421,788	− 0.36	1,841,941	1,822,307	−1.07	588,561	599,481	+1.86
Tirunelveli	2,704,339	2,730,279	+ 0.96	1,877,849	1,882,397	+0.24	826,490	847,882	+2.59
Kanyakumari	982,938	996,915	+ 1.42	841,051	846,836	+0.69	141,887	150,079	+5.77
STATE	32,848,466	33,686,953	+ 2.55	24,312,435	24,696,425	+1.58	8,536,031	8,990,528	+5.32

The rural growth rate of 8.2% is often subject to the criticism that the Census machinery has not functioned properly in rural areas. While it is difficult to assess the efficiency of the Census in the rural areas separately, I have nevertheless the independent evidence of the houselist. I have presented the comparative figures of the houselist and Census populations and the figures indicate a fairly close pattern in both. These two operations were conducted at different periods and by entirely different set of officials and we cannot dismiss the picture given by the houselist altogether. The percentage variation between the houselist population and Census population in the rural areas is only 1.58% as against 5.32% in urban areas. It will show a more complete enumeration in rural areas. The reasons for this will be found in my Report on Housing and Establishments of Madras State.

The picture of migration has not been the same throughout and therefore the application of a method like the "Ratio Method" is bound to give absurd results. Traditionally, Madras has been an out-migrating State. But the 1941-51 decade witnessed for the first time in 3 decades the phenomenon of a heavy in-migration. The impact of this was not realised at the time of the 1951 Census, nor is there any mention about this in the 1951 Census Report for India as well as Madras. On the other hand, the 1951 Census Reports for Madras as well as India involve the implicit assumption of an out-migration instead of an in-migration. It was Zachariah in 1961 who pointed out the possibility of an in-migration in 1941-51, and this has been confirmed by our computations by the Census Survival Ratio Method. If we realise that the growth rate for 1941-51 was only 15.4, in spite of a net in-migration of 2% there is hardly any need to explain a 11% increase in 1951-60, with a 4% net out-migration.

The low rural growth rate can be explained by a heavy rural to urban migration. The rural-urban migration rate has been found to be 5.3% of the urban population of 1951 by the Short Survival Ratio Method. The birth place data approach has revealed a net rural-urban migration in 1951-61 of 3.8% of the urban population in 1951. Madras has undergone rapid industrialisation during the last decade and the process of industrialisation is bound to draw more and more rural folk to urban areas. It is, therefore, not surprising that the urban areas have experienced a growth rate of 20.6% as against the rural growth rate of 8.20%

The following are the districts which have revealed a low percentage variation of rural population.

	Rural % variation in 1951-61	% under-count as revealed by P. E. C.
Coimbatore	0.21	0.66
Nilgiri	3.01	0.77
Madurai	5.22	1.26
North Arcot	6.06	0.81
Tiruchirapalli	6.42	0.45
Thanjavur	7.47	0.76

The Post-enumeration check does not reveal an abnormal degree of under-count in these areas. Further the district of Coimbatore which has revealed the lowest percentage variation is perhaps the district which has undergone the most rapid industrialisation in the last decade. The low growth in this district can, therefore, be explained by an excessive rural to urban migration in the last decade. This is evident from the urban variation of 62% in the current decade. A similar explanation will hold good for Nilgiri district which has experienced a variation of 102% in its urban population. The low rural variation in the remaining districts is probably due to the operation of a higher death-rate in the rural areas rather than a heavy rural to urban migration.

CHAPTER V

URBAN POPULATION

General

It has not been possible for me to define precisely what an urban area is. The following principles were laid down by the Registrar General, India for declaring a locality as urban.

1) 75% of the male population of the area should depend on non-agricultural resources for their livelihood with a total population of not less than 5,000
2) There should be a density of 1,000 persons per square mile with a total population of not less than 5,000

In addition a statutory unit like a Corporation, Municipality or Cantonment should be treated as urban. What was actually done was to declassify the urban areas of 1951 which did not satisfy two of these conditions and to reclassify some of the rural areas as urban in 1961. The final classification was no doubt based on the views of the Collectors and on what was observed by inspection and did not rigidly conform to what was laid down by the Registrar General.

Previous practice

2. It has been the practice in Indian Census to prepare a list of places to be classified as towns at every Census by State Superintendents and get it approved by the State Government. All municipalities, cantonments and other places having a local administration were declared as towns. All other places with a total population of not less than 5,000 persons were also treated as towns, if according to State Government and Census Superintendent, they possessed definite urban characteristics. In actual practice, many States sometimes declared as towns even those places with a population of much less than 5,000. The basis of classification varied not only from State to State but also from district to district within the State.

Basis of classification in 1961

3. In 1961, however, the Registrar General, India felt that since urbanisation would be a major field of study from 1961 onwards, great strictness and uniformity should prevail in future in the definition of the town, so that precise criteria should be set up in the interest of comparability. For Census purposes, a town should be defined as an area of 5,000 population or over, not less than three fourths of whom depended on non-agricultural livelihoods. Where the population was predominantly agricultural, the background was rural and it could not be classified as urban. Where the livelihood was predominantly non-agricultural, there was likely to be a more urban background and the place could be treated as a town. In 1951, in West Bengal, it was prescribed that in order that a place might be classified as a town, it should have a population of not less than 5,000 and a density of not less than 1,000 persons per sq. mile and that at least three fourth of the adult male population should be employed in pursuits other than agriculture. In many States where the average urban density would not be as high as in West Bengal, urban localities may not attain such a high density. Further it should be possible to apply the other two criteria uniformly to all States. It was, therefore, suggested that in the case of all States, localities other than municipalities, cantonments or civil lines should be treated as towns for the purposes of the Census if their population was not less than 5,000 and their adult male population in non-agricultural livelihood was at least three fourths of the total male population of the locality. The application of these principles involved a reclassification of rural-urban areas.

Evolution of urban concept in Madras State

4. At this stage it will be relevant to examine how the concept of an urban area or a town has been evolved in Madras State. A town is always a word of some vague application and

some difference of opinion will exist on its appropriate definition. In 1881, a town was a collection of numerous dwellings near each other within a limited area having shops which provided a continual open market for the supply of goods especially manufactured goods. This was fairly elastic and for the rest the selection was left very much to the district officers. The result was probably the best obtainable. The definition had perhaps been interpreted too little in Tirunelveli and too rigidly in Malabar. But it is known that in the former, people did congregate in closely built villages much more than in any other district and that reverse was the case in Malabar and Canara. It included for instance 186 Amsams or townships in Malabar, each on an average occupying 15 sq. miles and many of them not containing a single street.

In 1901, every municipality was treated as a Census town. Every other continuous collection of houses permanently inhabited by not less than 5,000 persons was treated as a Census town by the State Superintendent after taking into consideration, the character, relative density of its population, its importance as a centre of trade and its historical association.

In 1911, the same standard was maintained, cantonments also being treated as towns. The definition of Census towns remained unchanged in 1921, 1931 and 1941. The important factor in all these definitions was what statute recognised as a municipality was always declared as a town for Census purposes. The fact however is that the boundary of a town and village is a freak of history than the reflection of a natural severance. The urban aggregation was defined from local circumstances and thereafter maintained distinct throughout. Vagaries in conferment of town status have acted in both ways by wrong inclusion as well as wrong exclusion of Census towns. But in Census tables figures represent close approximation to effective rural-urban distribution and if anything, tend to understate the urban element.

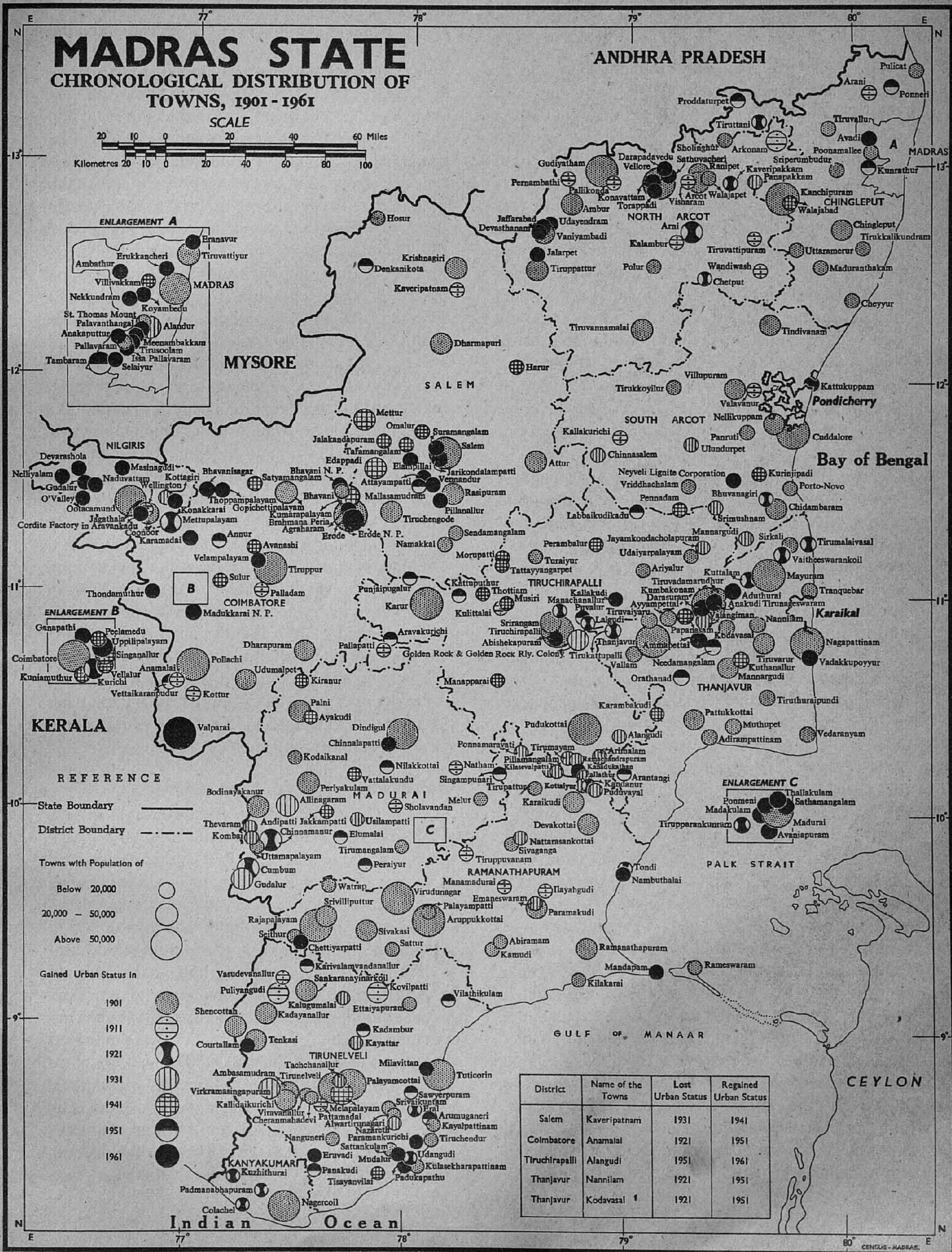
In 1951, the fundamental criteria for classification of any local area as a town was declared as the presence of urban features which could be judged by the way in which the towns have been built and the availability of urban amenities such as a bazaar where one could buy one's normal requirements throughout the year, facilities for education, recreation and medical treatment.

Again the State Superintendents had full discretion in declaring an area as urban. Thus though the basic concept of rural and urban has remained unchanged, the boundaries were bound to vary from Census to Census in accordance with the attitude adopted by the State Superintendents which to a certain extent depended on the recommendation of District Collectors. At the same time the definition tended to be more practical than pragmatic and may perhaps represent the best approximation possible to the conditions prevailing in the State.

In 1961, a more precise definition of urban area was attempted basing it on the principles enunciated by the Registrar General, India. But in applying these principles, a certain practical approach had been made which in turn has resulted in modifying the principles on the basis of the recommendation of local officials who could always be in a better position to judge the urbanity or otherwise of the place. One important step taken in 1961 to standardise the concept of urban area was to reclassify certain towns of 1951. In actual practice declassification mostly took place in the districts of Tirunelveli and Kanyakumari. What has been achieved in this Census is to eliminate the differences from district to district and see that a uniform principle has been applied throughout the State which could stand the scrutiny on statistical basis.

Classification of urban - rural in 1961

5. The application of these concepts to the conditions obtaining in the State meant a declassification of some towns in 1951 and reclassification of some villages as urban in 1961. Again some places which had definite urban characteristics did not fulfil all the conditions about population or density or dependence on non-agricultural livelihood. It was, therefore, felt that a detailed investigation of the urban characteristic of each place should be undertaken before a final decision was taken. The following standard was adopted for classification of urban and rural areas in Madras State. All Corporations, Municipalities, Cantonments and Townships were declared as urban. Places which had definite urban characteristics were treated as urban even though their population fell short of 5,000 or the density was



District	Name of the Towns	Lost Urban Status	Regained Urban Status
Salem	Kaveripatnam	1931	1941
Coimbatore	Anamalai	1921	1951
Tiruchirapalli	Alangudi	1951	1961
Thanjavur	Nannilam	1921	1951
Thanjavur	Kodavasal	1921	1951

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less than 1,000 per square mile or the population depending on non-agricultural livelihoods was less than 75%. *It was stipulated that at least two of* these conditions should be fulfilled. A list of new towns to be included in 1961 Census and of towns to be deleted from urban areas in 1951 Census was prepared. The views of the Collectors based on their personal knowledge and on a detailed field investigation were sought. I personally visited a number of places accompanied by the Collector or the concerned Revenue Divisional Officer to satisfy whether a place should be included as urban for this Census or deleted from the list. This list was thus finalised and approved by the State Government. 339 places were treated as urban areas. 30 places which were towns in 1951 were removed from the list of towns while 73 places were treated as new towns.

Special problem in Kanyakumari District

6. Some difficulty was experienced in the finalisation of the list of towns in Kanyakumari district. During houselisting it was found that certain places which were treated as towns in 1951 did not exist as separate units for purpose of location code and administration but formed part of the panchayats with the same or different names. The Collector, Kanyakumari was specifically requested to examine these cases and to report whether the panchayats in which the places which did not exist as separate units were merged could be treated as urban during this Census keeping in mind the principles enunciated by me for classification of towns for the 1961 Census. The Collector, Kanyakumari was of the view that in 1951 Census each hamlet was given a code number and a town was formed comprising one or more of such hamlets. No panchayat would also satisfy the condition that 75% of the male population of the area should depend on non-agricultural activities. The range of participation was from 32 to 68%. Unlike in the other districts of Madras State, the panchayats are not compact areas, but are unwieldy and scattered over a vast area comprising of several hamlets which are more rural in character than urban. They are separated from one another by vast stretches of paddy fields, coconut thopes and irrigation schemes. In a few panchayats the percentage of male population depending on non-agricultural occupations is high. But they represented only huge concentrations of fisherfolk who have more of rural atmosphere than urban around them. It was not, therefore, advisable to treat these unwieldy panchayats as towns simply for the reason that there are a large number of people in them taking to non-agricultural occupations. It was the view of the Collector that no place other than the four municipal towns, could be treated as towns for 1961 Census. This view was accepted by me. It involved the elimination of a large number of towns from the list of Kanyakumari district.

Limitations of definition

7. Even the yardstick applied during this Census has its limitations. In a State like Madras where the density of population is higher than most of the States, it is likely that the administrative units having more than 5,000 population and a density of 1,000 per sq. mile can be found in large numbers. Again on classification of certain activities like fishing, mining and plantation as non-agricultural, it is likely that places will be found where more than 75% of the population will depend on non-agricultural activities for their livelihood. So any rigid application of these three tests is likely to result in the classification of certain areas as urban when there is no justification to do so. At the same time, smaller places which are of tourist importance and which have definite urban characteristics are likely to be omitted. To what extent the classification in 1961 has been made on the proper lines will be indicated briefly.

Administrative limitations of rural-urban classification

8. Any rural-urban classification has its limitations imposed by administration. The boundaries of municipalities and panchayats are not fixed with reference to those characteristics which distinguish urban from rural. It is, therefore, likely that a rural sector will be included in an urban unit and what should normally form part of the urban unit will fall within a rural area. As such any general application of principles governing urban-rural classification will not be cent percent successful. That is why urban congregation was always defined in the past on

the basis of local knowledge. To give an instance in Madras City, Corporation limits are encircled continuously from north to south by regions which cannot be distinguished from the City itself. Actually while the population of the Corporation is limited to 17.3 lakhs, the industrial belt surrounding the Corporation has a population of 20 lakhs. Therefore, vagaries will be found in the conferring of town status on any place and this vagary has continued to exist from Census to Census. An attempt has been made in 1961 to give a definiteness to this vagary. but it cannot succeed because the boundaries have already been fixed. Whatever be the development of urban characteristic in any particular area, the authorities will not be prepared to define the boundaries or to rechange the boundaries of their municipalities and panchayats which are based on considerations which have nothing to do with the development of urban characteristics. With increasing population, developing industry and extending communication, a comparative growth in urban population is almost inevitable while the administration follows a policy of inertia with the result that no change will be made in an existing classification until the need for it becomes overdue and such classification will not always depend on the development of urban characteristics. According to the Registrar General, newly founded industrial areas, large housing settlements or places of tourist importance which have been recently served with all civic amenities can be considered to be urban in nature. But the problem is that such areas are not found exclusively within any notified boundary. Again a large city is not really limited to the notified municipal boundary, but will embrace satellite towns and cities and industrial towns or settlements close to the city which can even be surrounded by rural areas. Under the Second Five Year Plan, considerable progress has been made for the provision of facilities which were considered once to be the prerogative of the urban area among the villages in the State. They are facilities like electricity, drainage, protected water supply, hospital etc. The remarkable growth of these facilities in the rural sector of the State makes it difficult for us to classify the tract on the basis of the availability of such facilities. No more have the additional facilities available in urban areas like protected water supply, that significance in rural-urban migration as has been in the past. Again in the industrial development, a new pattern is observed in the State today. The industries are not always located within the municipal towns. For instance the industries growing round Madras are located in places like Ambathur, Tiruvattiyur and also in rural sectors which have developed urban characteristics. This is also found in areas like Coimbatore and Madurai. Another tendency found in the industrial development of Madras State is that even important industries like sugar manufacture and cement are located outside towns and in areas which are essentially rural in character. This shift in the industrial location has no doubt made any such classification difficult.

Difficulties in implementation

9. In implementation, one of the difficulties encountered was that the Tahsildar who sends specific recommendation regarding the classification cannot always appreciate the principles enunciated by us. For this reason, an element of personal inspection was imported in this classification during 1961 Census. A list of places which had a population of less than 5,000 and which had been declared as urban in 1951 Census was compiled. The percentage of male population engaged in non-agricultural livelihood was calculated with reference to the records available in my office. Actually it involved touring of the districts in the State and holding detailed discussions about the question whether any particular area should be declared as urban or not. Actually though urbanisation might have taken place in areas adjacent to important cities of the State, it was not possible to declare all areas contiguous to such cities as urban. A list of places deleted from the 1951 list is given in Table V-1. A list of places declared as new towns in 1961 is given in Table V-2.

There are a few places in which an exception was made. Uttaramerur of Chingleput district was classified as urban as it is the headquarters of a sub-taluk. Udaiyarpalayam of Tiruchirapalli district was treated as urban inspite of the fact that it had less than the normal non-agricultural population. Sattur of Ramanathapuram and Palayampatti of Ramanathapuram

TABLE V - 1

a) Towns of 1951 deleted in 1961 arranged district-wise by class and population in 1951

District	Town	Class	1951 Population
1	2	3	4
Tiruchirapalli	Varpet	V	5,540
Ramanathapuram	Mallanginar	V	5,826
	Pandalkudi	VI	2,912
Tirunelveli	Sivagiri	IV	16,602
	Kalakad	IV	16,312
	Surandai	IV	14,494
	Vadakkuvalliyur	V	9,146
	Samburavadakara	V	8,564
	Achiamputhur	V	6,092
	Pudur	VI	4,378
	Puliyara	VI	3,906
	Kadayam	VI	3,619
	Ayikudi	VI	3,348
	Elathur	VI	2,845
Kanyakumari	Kadiyapatnam	V	9,537
	Arumana	V	9,141
	Iraniel	V	9,113
	Thengapattnam	V	8,408
	Thuthur	V	7,734
	Aramboli	V	7,638
	Tiruvithamcode	V	7,450
	Kollencode	V	7,015
	Boothapandy	V	6,469
	Kanyakumari	V	5,218
	Kulasekharam	VI	4,894
	Suchindram	VI	4,535
	Thazakudi	VI	3,830
	Karingal	VI	3,107
	Azhakia-pandiapuram	VI	2,950
	Tiruvattar	VI	1,931

b) Towns in 1941 declassified in 1951

District	Town	Class	Population
Tiruchirapalli	Alangudi	VI	2,959
	Kiranur	VI	2,831

TABLE V - 2

Population and class of new towns in 1961

District	Town	Class	1961 Population
1	2	3	4
Chingleput	Avadi	IV	13,050
	Ambathur	IV	11,128
	Anakaputtur	V	7,460
	Issa Pallavaram	VI	4,316
	Nekkundram	VI	3,325
	Erukkancheri	VI	3,131
	Palavanthangal	VI	2,266
	Koyambedu	VI	2,125
	Meenambakkam	VI	1,596
	Tirusulam	VI	1,369
	Selaiyur	VI	829
	Eranavur	VI	193
North Arcot	Jalarpet	IV	16,411
	Darapadavedu	V	9,018
	Torappadi	V	6,720
	Sathuvacheri	V	6,371
	Udayendram	V	5,882
	Devasthanam	VI	3,109
	Jaffarabad	VI	2,761
	Konavattam	VI	2,648
South Arcot	Neyveli Lignite-Corporation	IV	10,296
	Kattukuppam	V	9,283
Salem	Suramangalam	IV	15,805
	Jarikondalampatti	V	8,184
	Attayampatti	V	7,666
	Vennandur	V	7,624
	Pillanallur	V	6,883
	Elampillai	V	6,193
Coimbatore	Valparai	II	80,023
	Uppilipalayam	III	23,207
	Erode N. M.	III	22,766
	Ganapathi	IV	14,176
	Madukkarai	IV	12,488
	Karamadai	IV	11,649
	Velampalayam	V	8,396

TABLE V-2 (Contd.)

Population and class of new towns in 1961

District	Town	Class	1961 Population
1	2	3	4
Coimbatore	Bhavani (Thottipalayam)	V	6,853
	Brahmana Peria Agraharam	V	6,714
	Thondamuthur	V	5,400
	Thoppampalayam	VI	3,913
	Bhavanisagar	VI	2,984
Nilgiri	O'Valley	IV	13,547
	Devarshola	IV	10,711
	Nelliyalam	IV	10,166
	Naduvattam	V	9,781
	Gudalur	V	8,328
	Jagathala	V	7,109
	Konakkarai	V	5,228
	Masinagudi	VI	3,465
	Cordite Factory in Aravankadu	VI	3,126
Madurai	Madakulam	IV	19,209
	Chinnalapatti	IV	17,963
	Avaniapuram	IV	13,151
	Thallakulam	V	6,892
	Ponmeni	V	6,638
	Sathamangalam	VI	1,432
Tiruchirapalli	Kallakudi	IV	10,377
	Alangudi	V	5,304
	Abishekapuram	VI	3,950
Thanjavur	Ammapettai	V	9,258
	Aduthurai alias Maruthuvakudi	V	8,587
	Anakudi Tiru-nageswaram	V	8,254
	Darasuram	VI	4,165
	Vadakkupoyyur	VI	2,242
Ramanathapuram	Chettiyarpatti	V	8,718
	Mandapam	V	6,257
	Kanadukathan	VI	4,973
	Nambuthalai	VI	3,812
Tirunelveli	Eruvadi	V	9,246
	Paramankurichi	V	7,570
	Mudalur	V	5,643
	Milavittan	VI	3,126
	Padukapathu	VI	1,643
	Courtallam	VI	813

district were retained as urban on the recommendation of the Collector. A similar treatment was accorded to Chetput in North Arcot district. Uthukuli was not included as urban on the recommendation of revenue authorities. Bhavani (Thottipalayam) in Coimbatore district was also an exception. In Nilgiri there was some difficulty. The basic test for urban area is the nature of activity of the majority of male population whether it is agricultural or non-agricultural. It has no direct bearing on the development of the area. The density of population is comparatively low in Nilgiri district. Actually in the classification, condition 2 had to be relaxed in Nilgiri district. Nambuthalai in Ramanathapuram district was treated as urban. It was originally part of Tondi panchayat. Characteristics were more or less similar. It depends on non-agriculture for livelihood. In actual practice, no rigidity was observed in observing these standards, but some relaxation was permitted wherever it was justified on personal inspection.

Modifications made in the list of places proposed for inclusion as new towns in 1961

10. a) In the original list prepared for inclusion of new towns for 1961, there were only 60 places. Out of these, 53 places consisted of places where three fourth of the male population was depending on non-agricultural resources for their livelihood. Out of these 53 places, one place (Irumpili of Kanyakumari) was deleted owing to the fact that the place did not exist as a separate unit for purposes of Census operation and administration, but only formed part of some other panchayat (Colachel (P)) and that the panchayat in which it has merged is not a compact area and scattered over a vast area comprising of several hamlets which are more rural than urban in character.

Vaniyambadi non-municipal area was bifurcated and formed into two panchayats — Jaffarabad and Devasthanam—and these two units were treated as urban in place of Vaniyambadi non-municipal area. Tirupparankunram (N. P.) area merged with Tirupparankunram (P) which was already a town in 1951.

b) In November, 1960 a further list of places to be included as towns for 1961, based on

the reports and personal visit of the local Revenue Officers was prepared.

A factual report was made by the concerned Municipal Commissioners. The percentage of male dependents on non-agricultural occupation was worked out for each locality. The following statement will give the result of the study.

Principal City	Adjoining locality	Population	% of males depending on non-agricultural occupation	Density (population per sq. mile)
1	2	3	4	5
Tiruchirapalli	Abhishekapuram	3,330	74	1,521
	Varaganeri	1,137	96	(Area figures not available)
Madurai	Thallakulam	3,798	75	1,466
	Ponmeni	3,160	84	2,612
	Sathamangalam	878	97	1,792
Vellore	Konavattam	2,329	77	2,218
Tiruvattiyur	Eranavur	1,528	75	2,214
Madras	Erukkancheri	2,596	87	6,181
	Koyambedu	2,334	62	1,755
	Nekkundram	2,596	69	2,545
	Palavanthangal	1,192	64	3,612
	Meenambakkam	1,184	97	1,012
	Tirusulam	977	92	1,074
	Issa Pallavaram	4,262	83	21,310
	Selaiyur (excluding portions within the limits of I.A.F. included in Tambaram Panchayat	628	74	(Area figures not available)

This list included localities adjacent to towns where urbanisation has taken place and also places adjacent to Madras City which were densely populated with a fairly large proportion of males engaged in non-agricultural occupations. Out of these 15 places, Varaganeri of Tiruchirapalli district was deleted as it was reported to be an uninhabited village.

Observations on urban classification

11. It shows that a more scientific approach has been made to this problem than was possible in the past. But difficult problems are likely to be faced in future. With the introduction of Panchayat Raj throughout the State, definite boundaries have been ear-marked for all units which compose the State. Because of its implication on elections, it is unlikely that any boundary can be changed in future. So in urban development resulting from industrialisation, improvement of communication or switchover to non-agricultural occupation is bound to result in haphazard growth of areas which will cut across boundaries now statutorily fixed. Again non-agricultural activities include fishing and plantation which are found in different parts of the State in somewhat rural surroundings. It will mean that an application of 75% formula of male non-agricultural population will result in certain areas being treated as urban. This tendency was definitely opposed by the Collector of Kanyakumari. But it did result in Valparai panchayat which has a huge collection of estate with no definite urban way of life being classified as urban though it had a large area and a definite rural background. I think it will be better to study this problem during inter-Censal period by what is called "on the spot study" and evolve some standard by which urbanisation can be defined more precisely.

As observed in the past, Madras has more urban characteristics than any other State in India though the definition has been more strict in this State. It has always followed the recommendations of District Collectors who had adopted some strict standards for definition. The result of the re-classification showed that only Tirunelveli contained more areas which were treated as urban and which had to be declassified. Perhaps to get a more realistic picture of what is an urban area and what is not, it may be necessary for us to consider the question of treating portions of panchayats as urban.

Lot of attention has no doubt been devoted to the classification of urban and rural during 1961 Census. But I cannot escape from the feeling that it is not as perfect as it should be. A proper correction to any adoption of the principle would be a personal inspection in which the urban characteristics should be assessed factually and physically. Again any such classification will suffer from the limitation imposed by geographical and administrative

boundaries. It is the view held by my predecessors that Tamilian is more urban in character than any other ethnic group and Madras State has a percentage of 83% of Tamilians. As such it is more urban than any other State in India. By the systematic implementation of the Plans more facilities are being given to the rural tract, more so under medical and school facilities. What has dragged people to the urban sector in Madras State is the need for work and this tendency has been offset to a great extent by agricultural prosperity in the rural sector of Madras State. For these reasons there is a levelling of facilities and sharper differences which have been noticed *between rural and urban sectors in the past have* tended to equalise. These factors should also be taken into consideration in deciding what should be urban or rural in future.

An appraisal of the fulfilment of conditions by towns

12. Two tables are presented — one for municipal towns and other notified areas and another for new towns—in which the figures of the three components of a "town" are shown.

TABLE V-3

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in municipalities, cantonments and townships

Name of municipality/cantonment/ township	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding 0–14	Male population in non-agricultural sector excluding 0–14	Percentage of Col. 6 to Col. 5
1	2	3	4	5	6	7
Municipalities:						
1. Chingleput Dt.						
1 Tiruvattiyur (M)	8.00	4,696	37,571	12,227	10,248	83.81
2 Kanchipuram (M)	4.50	20,603	92,714	30,304	24,649	81.34
2. North Arcot Dt.						
1 Arkonam (M)	2.50	12,263	30,658	9,752	7,575	77.68
2 Arcot (M)	2.90	8,631	25,029	7,761	6,304	81.23
3 Walajapet (M)	1.03	12,795	13,179	3,912	3,204	81.90
4 Gudiyatham (M)	1.82	27,684	50,384	15,093	12,447	82.47
5 Tiruppattur (M)	1.79	17,206	30,799	9,450	7,144	75.60
6 Vellore (M)	4.17	27,276	113,742	35,593	28,725	80.70
7 Ambur (M)	7.20	5,480	39,455	11,759	8,840	75.18
8 Arni (M)	4.50	6,967	31,351	9,569	7,621	79.64
9 Tiruvannamalai (M)	5.10	9,106	46,441	14,394	10,935	75.97

TABLE V - 3 (Contd.)

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in municipalities, cantonments and townships

Name of municipality/ cantonment/township	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding 0–14	Male population in non-agricultural sector excluding 0–14	Per centage of Col. 6 to Col. 5
1	2	3	4	5	6	7
3. South Arcot Dt.						
1 Cuddalore (M)	10.70	7,399	79,168	24,109	17,991	74.62
4. Salem Dt.						
1 Salem (M)	7·89	31,577	249,145	77,571	64,518	83.17
2 Rasipuram (M)	2.85	8,376	23,871	7,190	5,979	83.16
5. Coimbatore Dt.						
1 Erode (M)	3.22	22,907	73,762	23,153	19,243	83.11
2 Dharapuram (M)	1.94	13,655	26,490	7,847	6,067	77.32
3 Tiruppur (M)	10.50	7,597	79,773	25,904	21,967	84.80
4 Mettupalayam (M)	2.70	13,517	36,496	11,276	9,438	83.70
5 Coimbatore (M)	8.86	32,314	286,305	97,594	80,298	82.28
6 Pollachi (M)	5.35	10,162	54,369	17,446	14,113	80.90
7 Udumalpet (M)	2.70	10,498	28,345	8,548	6,897	80.69
6. Nilgiri Dt.						
1 Coonoor (M)	5.81	5,282	30,690	9,590	7,893	82.30
7. Madurai Dt.						
1 Dindigul (M)	5.41	17,181	92,947	28,748	23,356	81.24
2 Palni (M)	2.03	19,622	39,832	13,489	10,515	77.95
3 Madurai (M)	8.56	49,627	424,810	134,992	106,309	78.75
8. Tiruchirapalli Dt.						
1 Karur (M)	2.33	21,701	50,564	16,167	13,126	81.19
2 Tiruchirapalli (M)	8.98	27,824	249,862	83,117	63,971	76.97
3 Pudukottai (M)	5.00	10,098	50,488	16,286	12,428	76.31
9. Thanjavur Dt.						
1 Kumbakonam (M)	4.42	20,946	92,581	29,470	22,782	77.31
2 Nagapattinam (M)	5.44	10,857	59,063	19,157	14,940	77.99

TABLE V-3 (Contd.)

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in municipalities, cantonments and townships

Name of municipality/ cantonment/township	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding 0–14	Male population in non-agricultural sector excluding 0–14	Percentage of Col. 6 to Col. 5
1	2	3	4	5	6	7
10. Ramanathapuram Dt.						
1 Karaikudi (M)	5.49	7,960	43,698	13,311	10,381	77.99
2 Aruppukkottai (M)	6.00	8,367	50,200	15,126	12,526	82.81
3 Virudunagar (M)	2.47	22,197	54,827	17,094	13,959	81.66
4 Sivakasi (M)	2.90	10,583	30,690	9,592	8,373	87.29
5 Srivilliputtur (M)	2.17	21,574	46,816	13,928	10,450	75.03
11. Tirunelveli Dt.						
1 Tuticorin (M)	5.20	23,890	124,230	40,104	33,410	83.31
2 Tirunelveli (M)	5.85	15,041	87,988	28,317	21,667	76.52
3 Melapalayam (M)	6.50	5,970	38,806	11,866	9,268	78.11
12. Kanyakumari Dt.						
1 Colachel (M)	2.00	7,837	15,673	4,722	3,776	79.97
Cantonments:						
1. Chingleput Dt.						
1 St. Thomas Mount *cum*-Pallavaram (Cantt.)	2.22	7,113	15,790	4,986	3,720	74.61
2. Nilgiri Dt.						
1 Wellington (Cantt.)	2.42	4,986	12,067	4,407	3,825	86.79
Township:						
Madurai Dt.						
1 Kodaikanal (T)	6.50	1,978	12,860	3,917	3,133	79.98
Municipal Township Committee:						
Salem Dt.						
1 Mettur (M.T.C.)	5.64	4,911	27,698	8,870	7,201	81.18

TABLE V - 4

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in the new towns of 1961

Name of new town	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding age-group (0–14)	Male Population in non-agricultural sector excluding age-group (0–14)	Percentage of Col. 6 to Col. 5
	2	3	4	5	6	7
1. Chingleput District						
1 Avadi (Panchayat) (Paruthipattu)	2.17	6,014	13,050	4,619	3,535	76.53
2 Erukkancheri (P)	0.42	7,455	3,131	1,049	821	78.27
3 Ambathur (P)	3.00	3,709	11,128	3,713	2,831	76.25
4 Koyambedu (P)	1.57	1,354	2,125	691	562	81.33
5 Nekkundram (P)	1.02	3,260	3,325	1,074	801	74.58
6 Meenambakkam (P)	1.17	1,364	1,596	518	426	82.24
7 Issa Pallavaram (P)	0.20	21,580	4,316	1,443	1,133	78.52
8 Tirusoolam (P)	0.93	1,472	1,369	480	439	91.46
9 Palavanthangal	0.32	7,081	2,266	703	559	79.52
10 Anakaputtur (P)	1.15	6,487	7,460	2,563	2,240	87.40
11 Selaiyur (P)	2.80	296	829	748	132	17.65
12 Eranavur (N.P)	1.30	148	193	38	36	94.74
2. North Arcot District						
1 Darapadavedu (P)	3.45	2,614	9,018	2,804	2,008	71.61
2 Udayendram (P)	2.01	2,926	5,882	1,671	1,174	70.26
3 Jaffarabad (P)	0.52	5,310	2,761	849	644	75.85
4 Devasthanam (P)	1.80	1,727	3,109	955	398	41.68
5 Jalarpet (P)	8.00	2,051	16,411	5,087	3,264	64.16
6 Konavattam (P)	1.05	2,522	2,648	770	572	74.29

TABLE V - 4 (Contd.)

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in the new towns of 1961

Name of new town	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding age-group (0–14)	Male population in non-agricultural sector excluding age-group (0–14)	Percentage of Col. 6 to Col. 5
	2	3	4	5	6	7
7 Sathuvacheri (P)	1.82	3,501	6,371	1,980	1,505	76.01
8 Torappadi (P)	2.72	2,471	6,720	2,459	789	32.09
3. South Arcot District						
1 Kattukuppam (P)	3.69	2,516	9,283	2,786	1,683	60.41
2 Neyveli Lignite Corporation (N.P)	21.15	487	10,296	4,487	4,178	93.11
4. Salem District						
1 Suramangalam (P)	1.89	8,362	15,805	4,962	3,672	74.00
2 Jarikondalampatti (P)	0.63	12,990	8,184	2,427	2,139	88.13
3 Elampillai (P)	1.07	5,788	6,193	1,864	1,527	81.92
4 Attayampatti (P)	4.00	1,917	7,666	2,359	1,954	82.83
5 Vennandur (P)	1.86	4,099	7,624	2,263	1,926	85.11
6 Pillanallur (P)	1.57	4,384	6,883	2,030	1,665	82.02
5. Coimbatore District						
1 Bhavani (Thottipalayam) (P)	7.07	969	6,853	2,253	1,011	44.87
2 Thoppampalayam (P)	5.50	711	3,913	1,480	633	42.77
3 Bhavanisagar (T)	2.25	1,326	2,984	1,212	630	51.98
4 Brahmana Peria Agraharam (P)	6.00	1,119	6,714	1,972	1,449	73.48
5 Erode (Non-Municipal) (N.P.)	10.84	2,100	22,766	7,384	4,804	65.06
6 Velampalayam (P)	6.68	1,257	8,396	2,554	2,086	81.68
7 Karamadai (P)	10.00	1,165	11,649	3,610	2,117	58.64
8 Uppilipalayam (P)	5.00	4,641	23,207	7,379	5,919	80.21

TABLE V - 4 (Contd.)

Area, density, population, and percentage of adult male population in non-agricultural sector to total adult male population in the new towns of 1961

Name of new town	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding age-group (0–14)	Male population in non-agricultural sector excluding age group (0–14)	Percentage of Col. 6 to Col. 5
	2	3	4	5	6	7
9 Madukkarai (N.P)	8.29	1,506	12,488	3,669	2,626	71.57
10 Ganapathi (P)	4.50	3,150	14,176	5,040	4,033	80.02
11 Thondamuthur (P)	5.17	1,044	5,400	1,589	779	49.02
12 Valparai (P)	150.00	533	80,023	25,435	23,301	91.61
6 Nilgiri District						
1 Gudalur (P)	18.52	450	8,328	2,691	2,036	75.66
2 Devarshola (P)	23.62	453	10,711	3,352	2,411	71.93
3 Nelliyalam (P)	36.83	276	10,166	3,027	2,478	81.86
4 O'Valley (P)	39.93	339	13,547	4,664	4,236	90.82
5 Masinagudi (P)	51.75	67	3,465	1,130	943	83.45
6 Naduvattam (P)	40.96	239	9,781	2,858	2,563	89.68
7 Konakkarai (P)	14.35	364	5,228	1,604	1,477	92.08
8 Jagathala (P)	7.38	963	7,109	2,248	1,397	62.14
9 Cordite Factory in Aravankadu (N.P.)	0.69	4,530	3,126	975	842	86.36
7. Madurai District						
1 Chinnalapatti (P)	3.50	5,132	17,963	5,405	4,685	86.68
2 Thallakulam (P)	2.59	2,661	6,892	2,074	1,555	74.98
3 Sathamangalam (P)	0.49	2,922	1,432	414	353	85.27
4 Ponmeni (P)	1.80	3,688	6,638	2,014	1,568	77.86
5 Madakulam (P)	4.61	4,167	19,209	5,817	4,396	75.57
6 Avaniapuram (P)	10.09	1,303	13,151	4,131	2,409	58.32

TABLE V - 4 (Contd.)

Area, density, population and percentage of adult male population in non-agricultural sector to total adult male population in the new towns of 1961.

Name of new town	Area in sq. miles	Density (per sq. mile)	Population	Total male population excluding age-group 0-14	Male population in non-agricultural sector excluding age-group (0-14)	Perecentage of Col. 6 to Col. 5
	2	3	4	5	6	7
8. Tiruchirapalli District						
1 Kallakudi (P)	4.26	2,436	10,377	3,384	2,692	79.55
2 Abhishekapuram (N.P)	2.20	1,795	3,950	1,413	1,066	75.44
3 Alangudi (P)	1.20	4,420	5,304	1,691	1,287	76.11
9. Thanjavur District						
1 Aduthurai alias Maruthuvakudi (P)	2.54	3,381	8,587	2,830	1,813	64.06
2 Anakudi alias Tirunageswaram (P)	2.61	3,162	8,254	2,634	1,956	74.26
3 Darasuram (P)	1.29	3,229	4,165	1,318	1,005	76.25
4 Ammapettai (P)	2.71	3,416	9,258	2,812	1,992	70.84
5 Vadakkupoyyur (P)	2.69	833	2,242	603	313	51.91
10. Ramanathapuram District.						
1 Kanadukathan (P)	2.00	2,487	4,973	1,427	832	58.30
2 Nambuthalai (P)	1.75	2,178	3,812	1,182	1,018	86.13
3 Mandapam (P)	1.31	4,776	6,257	1,806	1,554	86.05
4 Chettiyarpatti (P)	2.19	3,981	8,718	2,682	2,135	79.60
11. Tirunelveli District.						
1 Milavittan (P)	4.37	715	3,126	892	612	68.61
2 Courtallam (T)	3.68	221	813	285	211	74.04
3 Eruvadi (P)	5.03	1,838	9,246	2,280	1,207	52.94
4 Paramankurichi (P)	5.63	1,345	7,570	2,048	1,666	81.35
5 Mudalur (P)	5·00	1,129	5,643	1,473	888	60.29
6 Padukapathu (P)	5.88	279	1,643	474	206	43.46

All municipalities in the State satisfy the conditions laid down for treating the place as urban. In the case of non-municipal towns, the compliance with the conditions cannot be said to be complete. The variations are indicated in the Statement and an attempt has been made to give reasons why this departure has been permitted and is necessary for a proper classification of urban and rural areas in the State.

Consequent on the progress made under Fiver Year Plans in the provision of facilities like electricity, drainage, protected water supply, hospital, education, transport and communication etc, it has been noticed that in the case of large towns the urban area is not really limited to the notified municipal boundary but will include areas clustering round the principal town. It is likely that urbanisation has taken place in areas adjacent to the towns. So particular care was devoted to examine whether such adjoining areas should be declared as urban. Such areas should be well connected with the principal cities with facilities for easy and quick transportation of populations on account of business, work in newly founded industrial areas, large housing settlements, places of tourist importance etc. which have been served with all civic amenities.

The following places declared as new towns in 1961 justify the principles enunciated above.

1. Eranavur (N.P.)

It is in close proximity to the limits of Tiruvattiyur municipality and forms part and parcel of the Eranavur revenue village. A portion of this revenue village is already under the jurisdiction of the municipality which is adjacent to Madras. Several large scale industries are likely to spring up. It is at present a non-municipal and non-panchayat area.

2. Selaiyur

Adjacent to Tambaram Panchayat which is a prominent sub-urban area of Metropolitan Madras. Already a portion of the village is included in Tambaram Panchayat.

3. Devasthanam

This place was formerly included in Vaniyambadi non-municipal area which has been separated into two panchayats—Devasthanam and Jaffarabad. The Panchayat is contiguous to the Vaniyambadi municipal area and a sizable proportion of population in both Jaffarabad and Devasthanam panchayats depend on commercial and industrial (beedi making and tanning) occupations.

4. Konavattam

This place surrounds Vellore Municipality. It is connected by moffusil bus service and tanneries are located there.

5. Bhavani N.P. (Thottipalayam)

This place was recommended by former Superintendent of Census Operations, Sri. Venkateswaran for inclusion as a town in the next Census. The portion of village not included in Bhavani (P) which is a town has been constituted into a panchayat.

6. Bhavanisagar Township

As per 1951 statistics, this place had a population of over 31,000 and most of the males (99.2%) depended on non-agriculture since the Bhavanisagar dam was under execution in 1951. Before this Census, the construction work was over and most of the working population left the place and the population has now reduced itself to less than 5,000. Since the place is important in view of the dam site and works, the area has been declared as Township. All Townships are notified areas and hence this has been treated as a town.

7. Courtallam Township

This place which is growing in importance as a place of tourist centre was declared a township and as such has been treated as a town.

8. Vadakkupoyyur

As per 1951 statistics, this place had a population of 5,748 and 71% of the male population depended on non-agricultural resources with a density of 1,359 persons per sq. mile. The Collector recommended the inclusion of this place as a town.

9. Kanadukathan

Kanadukathan is a major panchayat. A livestock farm and Annamalai Polytechnic have been established. One textile mill named Jawahar

Mill is also functioning employing about 500 persons. There is abundant scope for industrial advancement of this town. Electricity substation centre is also located in this place. In 1951, this place had a population of 5,007 and 77.9% of male population depended on non-agricultural resources. The Collector recommended the inclusion of this place as town.

10. Milavittan

As per 1951 Census this place had a population of 5,576 and 82% of the male population depended on non-agricultural resources. The density was 950 persons per sq. mile.

11. Padukapathu

In 1951 this place had a population of 5,113 and 84.24% of the male population depended on non-agricultural resources. The density was 870 persons per sq. mile.

12. Thoppampalayam

As per 1951 statistics, this place had a population of 5,665. 90% of the male population depended on non-agricultural occupations. The density was a little less than 1,000.

These places were treated as towns on the basis of discussions with Collectors and Revenue Divisional Officers and after personal inspection.

Difficulties encountered in computation of urban areas

13. *1. Source*: Urban area figures are available with the Tahsildars and in case of municipalities or cantonments with the executive authorities concerned. Since data furnished by the two authorities varied, the matter was taken up with the Revenue authorities for reconciliation of the difference between the two sets of figures. Uniformly in respect of municipalities and cantonments the area figures furnished by the Commissioners and Executive Officers were adopted. In respect of other towns, panchayats and non-panchayats, the area figures as furnished by the Revenue authorities were adopted.

The main difficulty was however of computation of areas. Even though the components of municipalities and panchayats are known to the authorities concerned, the area of each component revenue village included in the town could not be correctly furnished by the local authorities. Certain areas included in towns were not surveyed or areas of portions of villages included in municipal towns and non-municipal towns could not be furnished correctly. In certain cases, the component parts included in towns varied with the lists maintained by the Tahsildars and the Municipal Commissioners. Correspondence had therefore to be initiated to set right the discrepancies and obtain area figures as accurately as possible. For certain municipal towns which have undergone changes since 1951 details of changes in area had to be obtained and the present area figures reconciled. In most cases the figures furnished in 1951 were given incorrectly and the difference explained as computational error.

Proportion of urban population in India and States

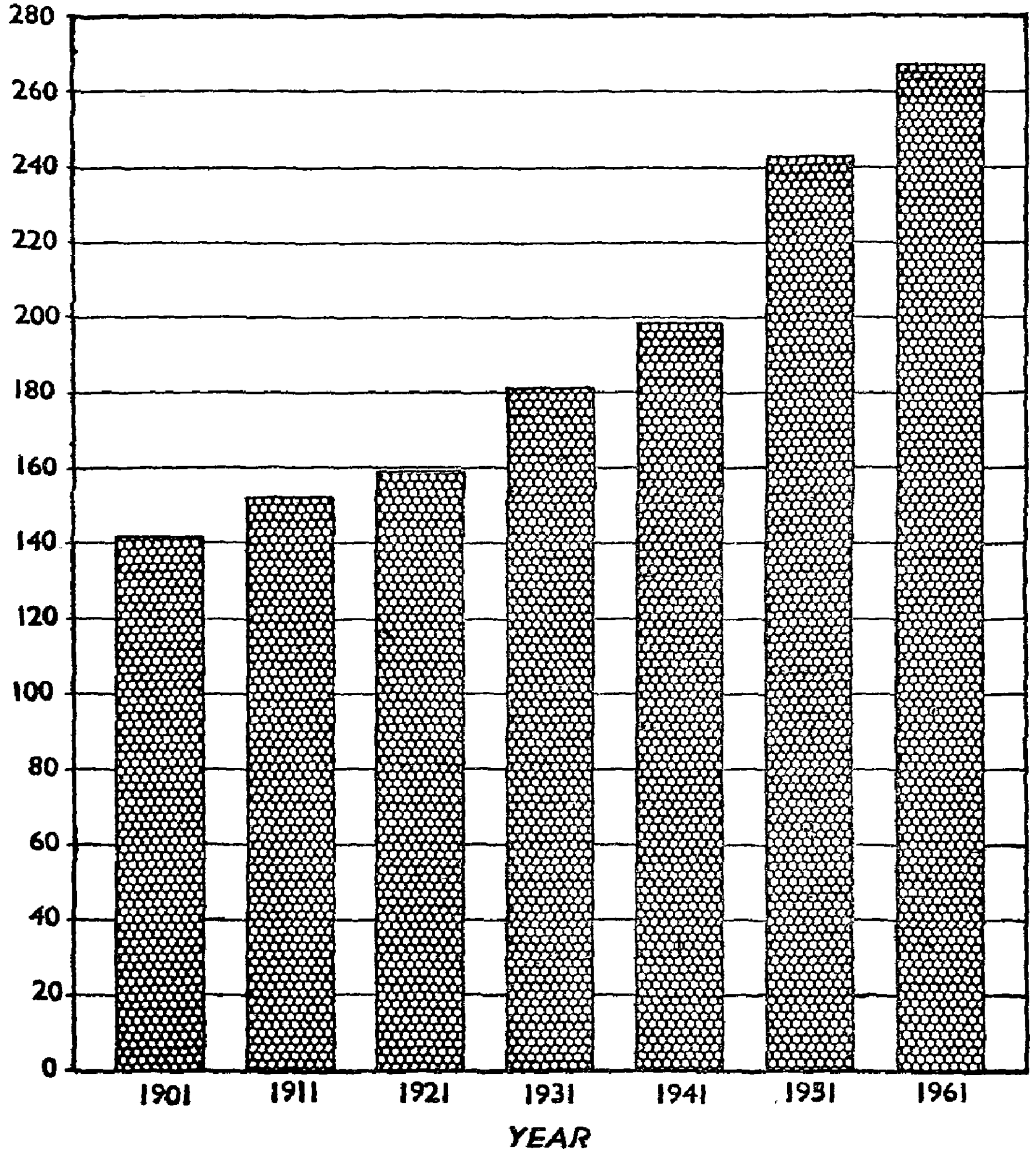
14. The following Table gives the percentage of urban population to total population for the States in India for 1961 and 1951.

TABLE V - 5

Proportion of urban population to total population in India and major States - 1951 and 1961

India/State	1961	1951	Variation
1	2	3	4
India	17.97	17.29	+ 0.68
Andhra Pradesh	17.44	17.42	+ 0.02
Assam	7.69	4.65	+ 3.04
Bihar	8.43	6.77	+ 1.66
Gujarat	25.77	27.23	— 1.46
Jammu & Kashmir	16.66	14.05	+ 2.61
Kerala	15.11	13.48	+ 1.63
Madhya Pradesh	14.29	12.02	+ 2.27
Madras	26.69	24.35	+ 2.34
Maharashtra	28.22	28.75	— 0.53
Mysore	22.33	22.95	— 0.62
Orissa	6.32	4.06	+ 2.26
Punjab	20.13	19.01	+ 1.12

PROPORTION OF URBAN POPULATION PER 1000 OF GENERAL POPULATION OF THE STATE 1901 - 1961



NUMBER OF TOWNS IN EACH CLASS OF TOWN IN THE STATE 1901 - 1961

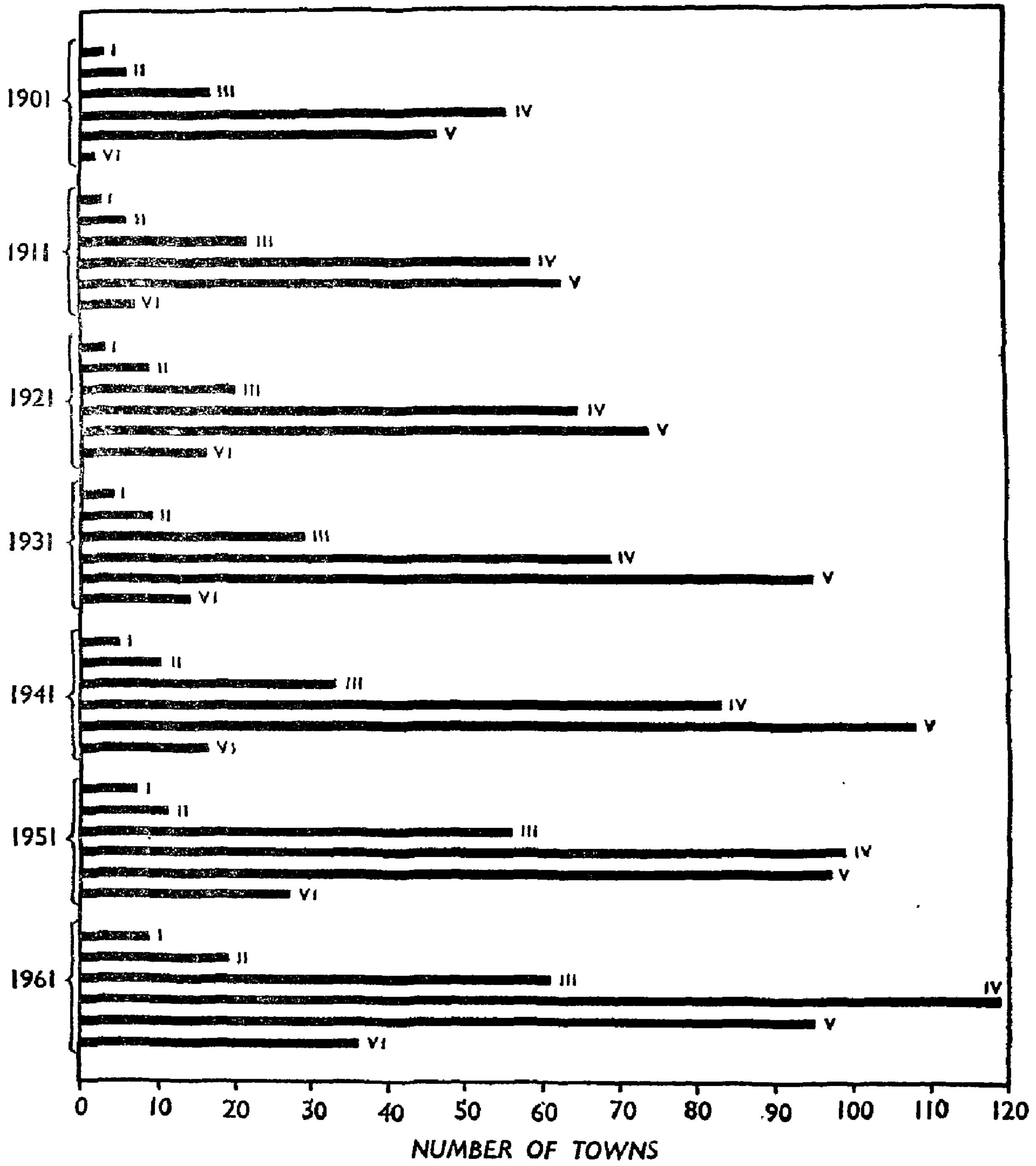


TABLE V - 5 (Contd.)

Proportion of urban population to total population in India and major States - 1951 and 1961

India/State	1961	1951	Variation
1	2	3	4
Rajasthan	16.28	18.50	— 2.22
Uttar Pradesh	12.85	13.64	— 0.79
West Bengal	24.45	23.88	+ 0.57

Proportion of urban population during 1901–61

15. The Table below gives the proportion of urban population per 1,000 of total population during the period 1901–61.

TABLE V - 6

Population living in towns per 1,000 of total population (1901–61)

Without adjustment for present definition		With adjustment for present definition	
1	2	3	4
1901	142	1901	140
1911	152	1911	149
1921	159	1921	155
1931	181	1931	177
1941	198	1941	194
1951	243	1951	237
1961	267	1961	267

Number of towns from 1901–61

16. The table given below shows the number of towns in each class during the period 1901 to 1961.

TABLE V - 7

Number of towns in each class of town in the State, 1901–1961

Class of Town	1961	1951	1941*	1931*	1921*	1911*	1901*
I	9	7	5	4	3	3	3
II	19	11	10	9	9	6	6
III	61	56	33	29	20	22	17
IV	119	99	83	69	65	59	56
V	95	97	108	95	74	63	47
VI	36	27	16	14	16	7	2
Total	339	297	255*	220*	187*	160*	131*

*Excludes the towns of Sembium and Saidapet in their respective classes which have merged with Madras Corporation

The constituents of a town-group have been classified according to their own population and not according to the population of the town-group.

A statement is shown indicating the additions and deletions of towns from 1911 to 1961 as per the present jurisdiction of the districts.

TABLE V - 8

Number of towns added and deleted during 1911 to 1961 as per the present jurisdiction of districts

District	1901 Total No. of Towns	1911 Addition	1911 Deletion	1921 Addition	1921 Deletion	1931 Addition	1931 Deletion	1941 Addition	1941 Deletion	1951 Addition	1951 Deletion	1961 Addition	1961 Deletion
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total	133†	29	...	33	6	36	3	35	...	44	4†	73	31
Madras	1	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput	15†	1	...	1	...	1	...	2	...	4	2†	12	...
North Arcot	11	7	...	3	...	1	...	...	...	...	...	8	...
South Arcot	9	2	...	3	...	4	2	2	...	...	...	2	...

TABLE V-8 (Contd.)

Number of towns added and deleted during 1911 to 1961 as per the present jurisdiction of districts

District	1901 Total No. of Towns	1911 Addi-tion	1911 Dele-tion	1921 Addi-tion	1921 Dele-tion	1931 Addi-tion	1931 Dele-tion	1941 Addi-tion	1941 Dele-tion	1951 Addi-tion	1951 Dele-tion	1961 Addi-tion	1961 Dele-tion
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Salem	9	1	...	...	...	...	1	8	...	2	...	6	...
Coimbatore	8	4	...	2	2	...	...	7	...	3	...	12	...
Nilgiri	2	1	..	...	...	1	...	..	...	...	...	9	...
Madurai	9	2	...	3	...	5	...	4	.	3	...	6	...
Tiruchirapalli	7	2	...	2	...	10	...	7	...	6	2	3	2*
Thanjavur	19	...	...	4	2	1	...	2	...	5	...	5	...
Ramanathapuram	19	3	...	3	...	6	...	1	...	1	...	4	2
Tirunelveli	23	6	...	3	2	6	...	2	...	11	...	6	11
Kanyakumari	1	...	...	9	...	1	...	...	...	9	...	...	16

† Includes Sembium and Saidapet towns which were merged with the Corporation of Madras

* Includes Golden Rock Railway Colony town merged with Golden Rock [Ponmalaipatti] [P] in 1961

The following points are of interest. No town was deleted in 1911. In 1921, six towns were deleted. In 1931, three towns ; in 1941 none and in 1951, two towns excluding Sembium and Saidapet towns which merged with Madras Corporation were deleted. As such it will be seen that Madras has applied a more or less uniform pattern in the deletion and classification of towns throughout the Census decades. In 1961, 31 towns were deleted. This includes the merger of Golden Rock Railway colony and Golden Rock Panchayat. They represent the impact of the reclassification and they are chiefly in Kanyakumari (16) and in Tirunelveli (11). Special circumstances have existed which compelled me to delete such a large number of towns. But the consistency in the growth of urban sector in Madras State is evident to any reader.

Population by size class of towns in India and State

17. Table V-9 gives the number and population of towns in 1951 and 1961 in VI classes for All-India.

Population of Cities and Towns Arranged in Six Classes, India and Madras, 1951 - 61

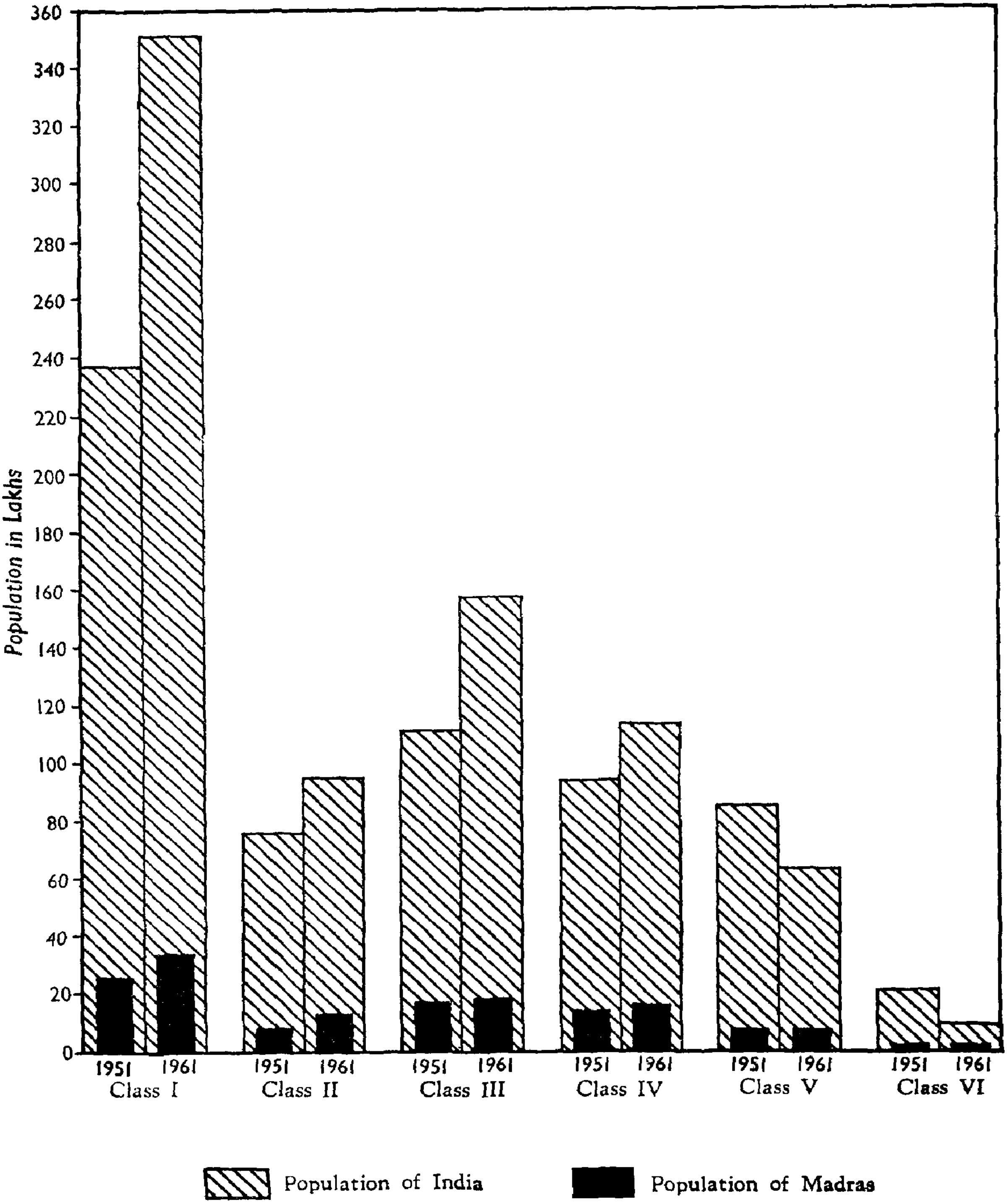


TABLE V-9

Number and population of cities and towns of 1951 and 1961 Censuses arranged in six classes (I to VI)

State	Class of Town	1961 No. of towns	1961 Total population	1951 No. of towns	1951 Total population	Increase or decrease in No. of towns	Increase or decrease in population of class	Percentage increase or decrease in 1951-61
1	2	3	4	5	6	7	8	9
INDIA	All Classes	2,700	78,936,603	3,060	62,443,934	—360	+16,492,669	+26 41
	I	107	35,123,940	76	23,729,758	+ 31	+11,394,182	+48.02
	II	139	9,529,812	111	7,624,667	+ 28	+ 1,905,145	+24.99
	III	518	15,749,144	374	11,114,671	+144	+ 4,634 473	+41.70
	IV	820	11,300,075	675	9,379,101	+145	+ 1,920,974	+20.48
	V	848	6,343,670	1,195	8,510,277	—347	— 2,166,607	—25.46
	VI	268	889,962	629	2,085,460	—361	— 1,195,498	—57.33
MADRAS STATE	All Classes	339	8,990,528	297	7,333,525	+ 42	+ 1,657,003	+22.59
	I	9	3,394,541	7	2,603,552	+ 2	+ 790,989	+30.38
	II	19	1,272,589	11	804,294	+ 8	+ 468,295	+58.22
	III	61	1,874,234	56	1,713,802	+ 5	+ 160,432	+ 9.36
	IV	119	1,624,376	99	1,364,491	+ 20	+ 259,885	+19.05
	V	95	714,812	97	746,420	— 2	— 31,608	— 4.23
	VI	36	109,976	27	100,966	+ 9	+ 9,010	+ 8.92

NOTE: The constituents of a town-group have been classified according to their own population and not according to the population of the town-group

The decade has recorded the population increase of 165 lakhs in the urban sector. But it has certain interesting features. Out of this an increase of 113.94 lakhs is recorded under Class I. Class II has recorded an increase of only 19 lakhs, but Class III has recorded an increase of 46 lakhs. This shows that the tendency in All-India has been for the higher class ranges to develop more than the lower class ranges. Let me examine it from the point of view of the number of towns. In 1951, India had 3,060 towns which fell to 2,700 in 1961. The loss was felt in Class V and VI with 347 towns and 361 towns respectively. Upgrading cannot account for such

a large number of deletions from the list. As such, it follows, that this has been the consequence of the stricter definition on urban areas adopted during this Census. With the disturbance of these towns from Class V and Class VI, about 34 lakhs of population have been lost. They are merged in higher class towns. The result has been concentration of towns in larger groups,Classes III. IV and V having the maximum number of towns in India, the population being concentrated in Class I to Class III, i. e. 20,000 and above population group. The decade 1951-61 has seen that the urbanity has been developed in the larger towns of India much more than by the addition to the lower groups. A similar statement is prepared for Madras State and the pattern is somewhat different from the All-India pattern discussed above. Net addition to the population is 16.57 lakhs. As in All-India pattern, about 8 lakhs have been added to the Class I group and about 5 lakhs to the Class II group. These two groups have, therefore, gained in preference to other classes. There is only a net addition of 9,010 under Class VI and Class V has lost 31,608 of population. Madras has in contrast to All-India gained in the number of towns from 1951 to 1961 by 42. Actually Madras has deleted 30 towns by a revised definition. But this has been counter-balanced by the number of new additions ordered in 1961. Therefore, we get a picture of Madras as having an urbanisation continuing as before, in that the number of towns has risen from 297 to 339. They are evenly distributed between three groups–Class III, Class IV and Class V and Madras has gained in urban population much more than what its total population has done in the All-India pattern.

Distribution of urban population by class of towns in 1951 and 1961

18. I give another table (Table V-10) indicating the proportion in each class of town to total urban population in 1961 and 1951 for India and Madras.

The variation is marked only in the group Class IV to Class VI which has recorded a fall from 31.99% to 23.48% for India. This fall has been shared by all other groups in various proportions. Therefore, the tendency has been for the larger towns to gain population at the

TABLE V-10

Proportion of population in each class of town to total urban population in 1951 and 1961.

State	CLASS I		CLASS II		CLASS III		CLASS IV–VI	
	1951	1961	1951	1961	1951	1961	1951	1961
1	2	3	4	5	6	7	8	9
India	38.00	44.50	12.21	12.07	17.80	19.95	31.99	23.48
Madras	35.50	37.76	10.97	14.15	23.37	20.85	30.16	27.24

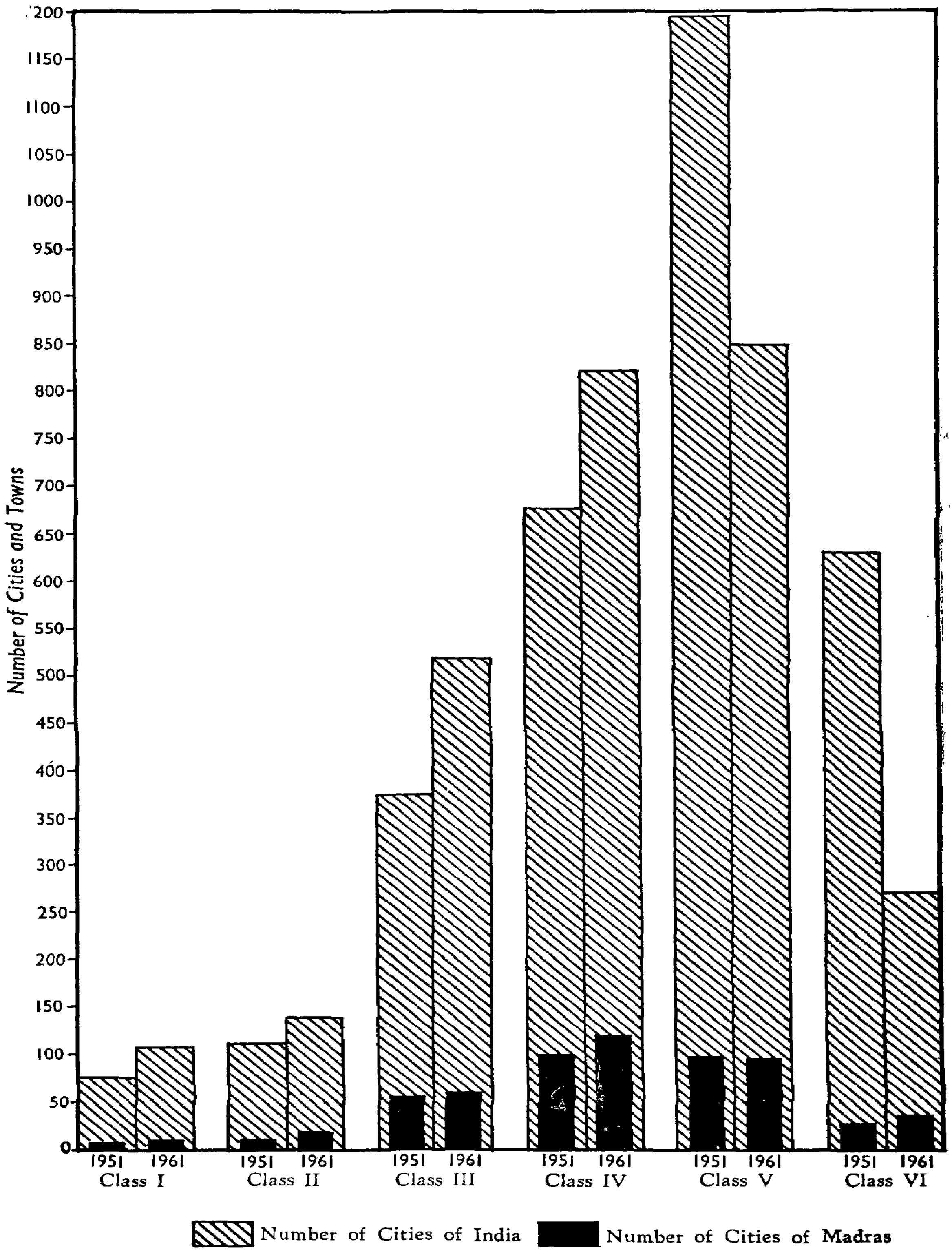
NOTE: The constituents of a town-group have been classified according to their own population and not according to the population of the town-group

expense of smaller towns. In Madras a small fall is recorded under Classes IV to VI which is not appreciable. Class III has recorded a fall from 23.37% to 20.85% which has been gained by Class II. The share of all other groups remained more or less steady. Therefore, the pattern of the growth of urban area in Madras State is more balanced than All-India. One of the reasons may be the care taken in classifying urban areas in 1951 and earlier Censuses. As I have already indicated in this discussion, the urban areas of Tirunelveli and Kanyakumari were mostly declassified and all other districts maintained almost the same position even on application of the new principles laid down by Registrar General. A graph is drawn indicating the number and population ranges of different classes of towns for Madras and All-India which will facilitate the understanding of what has been discussed above.

Town - group

19. A new concept "Town-group" was introduced in 1961 Census. Towns which are either contiguous or near each other having separate legally constituted civic administration like Municipality, Panchayat, Cantonment or a Township have been grouped together to form a town-group. It will serve as an independent unit for statistical purposes. 34 such town-groups have been formed in Madras State. It brings together areas which are urban units of administration interspersed with rural tracts. It also brings together units of urban administration which have been constituted from time to time and symbolised

Number of Cities and Towns Arranged in Six Classes, India and Madras, 1951 - 61



the growth of urban characteristics from decade to decade. For example, in the town-group Mount-Alandur, is grouped together seven urban units which give a total population of 63,702. Such grouping is more successful in districts like Chingleput, Nilgiri, Coimbatore, Madurai and Tirunelveli. It is less successful in districts like Salem where the urban tracts are scattered. The existence of a larger number of town-groups will show also rapid industrial development as in Kurichi town-group of Coimbatore district.

By this grouping, two town-groups have shown a population of more than one lakh. The first is Kurichi town-group which has a population of 119,380. The second is Palayamcottai town-group which has a population of 190,048. There is an essential difference between these two groups. In Coimbatore, the important urban areas have developed around the city which were constituted into different panchayats and are formed into a group, while in Palayamcottai, areas which have already developed, have been divided into three different municipalities and a panchayat. Tachchanallur. For reasons unconnected with the growth of towns, these three municipalities were statutorily formed in earlier days. Wherever large town-groups can be found, this approach is eminently successful. Still, we have small town-groups like Thallakulam having only a population of 8,324. The pattern of town-groups and its significance will be more clear from the discussion which will follow on Conurbation Zones. The table below gives the geographical distribution of cities and town-groups in the State.

TABLE V - 11

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located	
				Total density	Density of rural area
1	2	3	4	5	6
1. MADRAS	Madras (M.C.)	1,729,141	35,339	35,339	...
2. CHINGLEPUT	Tiruvattiyur (T.G.)	37,764	4,061	1,734	1,087
	a Tiruvattiyur (M)	37,571	4,696		
	b. Eranavur (N.P)	193	148		
	Nekkundram (T.G.)	5,450	2,104		
	a. Koyambedu (P)	2,125	1,354		
	b. Nekkundram (P)	3,325	3,260		
	Mount Alandur (T.G.)	63,702	10,064		
	a. St. Thomas Mount-cum-Pallavaram (Cantt.)	15,790	7,113		
	b. Alandur (P)	22,112	276,400		

TABLE V - 11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located: Total density	Density of rural area
	2	3	4	5	6
	c. Meenambakkam (P)	1,596	1,364	1,734	1,087
	d. Issa Pallavaram (P)	4,316	21,580		
	e. Tirusoolam (P)	1,369	1,472		
	f. Palavanthangal (P)	2,266	7,081		
	g. Pallavaram (P)	16,253	11,527		
	Tambaram (T. G)	34,329	6,893		
	a. Selaiyur (P)	829	296		
	b. Tambaram (P)	33,500	15,367		
3. NORTH ARCOT	Ranipet (T.G)	48,003	6,957	917	730
	a. Ranipet (M)	22,974	5,744		
	b. Arcot (M)	25,029	8,631		
	Vaniyambadi (T.G)	47,918	8,233	692	545
	a. Jaffarabad (P)	2,761	5,310		
	b. Devasthanam (P)	3,109	1,727		
	c. Vaniyambadi (M)	42,048	12,014		
	Vellore (T.G.)	122,761	17,438	947	567
	a. Konavattam (P)	2,648	2 522		
	b. Vellore (M)	113,742	27,276		
	c. Sathuvacheri (P)	6,371	3,501		
4. SALEM	Salem (M)	249,145	31,577	1,637	913

TABLE V-11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located: Total density	Density of the taluks in which they are located: Density of rural area
1	2	3	4	5	6
5. COIMBATORE	Bhavani (T. G.)	22,713	2,871	441	407
	a. Bhavani (Thottipalayam) (P)	6,853	969		
	b. Bhavani (P)	15,860	18,881		
	Kurichi (T. G.)	119,380	2,843	1,382	616
	a. Singanallur (P)	24,674	4,112		
	b. Uppilipalayam (P)	23,207	4,641		
	c. Kaniamuthur (P)	17,327	1,733		
	d. Kurichi (P)	28,407	4,370		
	e. Vellalur (P)	13,277	2,141		
	f. Madukkarai (N.P)	12,488	1,506		
	Coimbatore (M)	286,305	32,314		
	Anamalai (T.G.)	25,587	2,460	603	470
	a. Anamalai (P)	11,072	1,730		
	b. Vettaikaranpudur (P)	14,515	3,629		
6. NILGIRI	Nelliyalam (T.G.)	20,877	345	237	146
	a. Devarshola (P)	10,711	453		
	b. Nelliyalam (P)	10,166	276		
	Naduvattam (T.G.)	13,246	143	367	298
	a. Masinagudi (P)	3,465	67		
	b. Naduvattam (P)	9,781	239		

TABLE V-11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located: Total density	Density of the taluks in which they are located: Density of rural area
1	2	3	4	5	6
NILGIRI (Contd.)	Kotagiri (T.G.)	20,737	851	721	499
	a. Konakkarai (P)	5,228	364		
	b. Kotagiri (P)	15,509	1,546		
	Coonoor (T.G.)	52,992	3,251		
	a. Jagathala (P)	7,109	963		
	b. Coonoor (M)	30,690	5,282		
	c. Wellington (Cantt.)	12,067	4,986		
	d. Cordite Factory in Aravankadu (N.P)	3,126	4,530		
7. MADURAI	Palni (T.G.)	56,909	14,937	462	367
	a. Palni (M)	39,832	19,622		
	b. Ayakudi (P)	17,077	9,594		
	Uttamapalayam (T.G.)	25,427	2,312	592	405
	a. Uttamapalayam (P)	14,110	4,703		
	b. Kombai (P)	11,317	1,415		
	Thallakulam (T.G.)	8,324	2,703	2,502	769
	a. Thallakulam (P)	6,892	2,661		
	b. Sathamangalam (P)	1,432	2,922		
	Madurai (M)	424,810	49,627		
	Tirupparankunram (T.G.)	57,748	2,546		
	a. Ponmeni (P)	6,638	3,688		

TABLE V-11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located: Total density	Density of rural area
1	2	3	4	5	6
MADURAI (Contd.)	b. Madakulam (P)	19,209	4,167	2,502	769
	c. Avaniapuram (P)	13,151	1,303		
	d. Tirupparankunram (P)	18,750	3,034		
8.TIRUCHIRAPALLI	Lalgudi (T.G.)	20,009	3,357	714	628
	a. Puvalur (P)	6,135	2,444		
	b. Lalgudi (P)	13,874	4,021		
	Tiruchirapalli (M)	249,862	27,824	1,866	670
	Golden Rock (T.G.)	47,070	4,375		
	a. Abishekapuram (N.P.)	3,950	1,795		
	b. Golden Rock (P & Railway Colony)	43,120	5,037		
	i. Golden Rock Rly. Colony	19,560	12,538		
	ii. Golden Rock (P) (Ponmalaipatti)	23,560	3,366		
9. THANJAVUR	Kumbakonam (T.G.)	96,746	16,943	1,737	1,240
	a. Darasuram (P)	4165	3,229		
	b. Kumbakonam (M)	92,581	20,946		
	Thanjavur (M)	111,099	12,236	1,001	642
	Nagapattinam (T.G.)	61,305	7,541	1,164	825
	a. Nagapattinam (M)	59,063	10,857		
	b. Vadakkupoyyur (P)	2,242	833		

TABLE V - 11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located	
				Total density	Density of rural area
1	2	3	4	5	6
10. RAMANATHA-PURAM	Kottaiyur (T.G.)	11,338	4,535	552	403
	a. Pallathur (P)	5,560	5,560		
	b. Kottaiyur (P)	5,778	3,852		
	Tondi (T.G.)	10,234	3,139	398	337
	a. Tondi (P)	6,422	4,253		
	b. Nambuthalai (P)	3,812	2,178		
	Paramakudi (T.G.)	34,521	6,904	513	412
	a. Paramakudi (P)	25,368	10,147		
	b. Emaneswaram (P)	9,153	3,661		
	Aruppukkottai (T.G.)	55,977	6,997	436	350
	a. Palayampatti (P)	5,777	2,889		
	b. Aruppukkottai (M)	50,200	8,367		
	Seithur (T.G.)	20,403	1,835	790	472
	a. Seithur (P)	11,685	1,309		
	b. Chettiyarpatti (P)	8,718	3,981		
11. TIRUNELVELI	Tuticorin (T.G.)	127,356	13,308	914	515
	a. Milavittan (P)	3,126	715		
	b. Tuticorin (M)	124,230	23,890		
	Palayamcottai (T.G.)	190,048	7,639	1,039	493
	a. Tachchanallur (P)	12,252	2,455		

TABLE V - 11 (Contd.)

Geographical distribution of cities and town-groups

District	City and Town-group with name of each unit	Population with population of each unit	Density (persons per sq. mile) of each urban area	Density of the taluks in which they are located: Total density	Density of rural area
1	2	3	4	5	6
TIRUNELVELI (Contd.)	b. Palayamcottai (M)	51,002	6,764		
	c. Tirunelveli (M)	87,988	15,041	1,039	493
	d. Melapalayam (M)	38,806	5,970		
	Kallidaikurichi (T.G.)	75,657	2,226		
	a. Ambasamudram (P)	22,447	3,443		
	b. Vikramasingapuram (P)	32,978	1,413		
	c. Kallidaikurichi (P)	20,232	4,899	589	408
	Cheranmahadevi (T.G.)	19,861	1,528		
	a. Cheranmahadevi (P)	10,309	1,655		
	b. Pattamadai (P)	9,552	1,411		
	Kayalpattinam (T.G.)	28,336	1,157		
	a. Kayalpattinam (P)	13,432	1,119		
	b. Arumuganeri (P)	14,904	1,192	902	682
	Tiruchendur (T.G.)	22,752	1,956		
	a. Paramankurichi (P)	7,570	1,345		
	b. Tiruchendur (P)	15,182	2,530		
	Udangudi (T.G.)	25,946	2,529		
	a. Udangudi (P)	15,267	2,258	902	682
	b. Kulasekarapattinam (P)	10,679	3,051		
12. KANYAKUMARI	Nagercoil (M)	106,207	12,644	2,583	1,726

Conurbation

20. "Conurbation" in its literary sense means "the amalgamation of a group of neighbouring towns into large town". In the literature on Urbanisation, it has come to mean a "cluster of one or more central cities with their contiguous urban areas." The towns forming the cluster need not all be contiguous. Conurbation has a wider conception than what is meant by town-group, where there can be only one central town. Treatises on Urbanisation have not prescribed any minimum specifications or population limits to qualify a cluster of towns to be termed as conurbation. The towns forming a conurbation need not also lie within an administrative taluk or district. But it is understood that what is necessary to treat a cluster of towns as a conurbation is that there should be one or more basic factors which knit these towns together in the daily life of the people inhabiting those towns. The cementing force need not necessarily be social. It may arise on account of the pursuit of some common industry or on account of dealing in a common business. It may even arise on account of the establishment of some institutions of a servicing nature, like hospitals, colleges, etc.

In Madras State, several such conurbation zones could be located. How they have been located can briefly be stated as follows:-

A map of the State showing the towns represented by dots, whose sizes depended upon their populations was prepared. By eye-judgment and some close study of the map, I have delineated distinct clusters of cities and towns of different size classes (as distinct from town-groups), which are of course of larger and wider geographical extent than the town-groups. A ring was drawn round each cluster, taking care to see that there was some free space of non-urban or sparse urban area around each cluster. By such a process, the 18 conurbation zones were located in the State. They are given in the Statement below:-

LIST OF CONURBATION ZONES IN MADRAS STATE

S. No.	Name of the conurbation	Towns included in conurbation	Total population in 1961
1	2	3	4
1. Zone - 1	The Madras Metropolitan Conurbation	1. Madras (M.C) 2. Tiruvattiyur (M) 3. Tambaram (P) 4. Alandur (P) 5. Pallavaram (P) 6. St. Thomas Mount (Cantt.) 7. Villivakkam (P) 8. Kunrathur (P) 9. Poonamallee (P) 10. Ambathur (P) 11. Anakaputtur (P) 12. Issa Pallavaram (P) 13. Nekkundram (P) 14. Erukkancheri (P) 15. Palavanthangal (P) 16. Koyambedu (P) 17. Meenambakkam (P) 18. Tirusoolam (P) 19. Selaiyur (P) 20. Avadi (P) 21. Eranavur (N.P)	1,944,502

LIST OF CONURBATION ZONES IN MADRAS STATE (Contd.)

S. No.	Name of the conurbation	Towns included in conurbation	Total population in 1961
1	2	3	4
2. Zone - 2	Vellore-Ranipet Conurbation	1. Vellore (M) 2. Arcot (M) 3. Ranipet (M) 4. Visharam (P) 5. Walajapet (M) 6. Darapadavedu (P) 7. Torappadi (P) 8. Sathuvacheri (P) 9. Konavattam (P)	214,122
3. Zone - 3	Vaniyambadi-Ambur Conurbation	1. Vaniyambadi (M) 2. Ambur (M) 3. Udayendram (P) 4. Devasthanam (P) 5. Jaffarabad (P)	93,255
4. Zone - 4	Salem Conurbation	1. Salem (M) 2. Suramangalam (P) 3. Jarikondalampatti (P) 4. Omalur (P)	280,285
5. Zone - 5	Erode-Bhavani Conurbation	1. Erode (M) 2. Kumarapalayam (P) 3. Erode (N.P) 4. Bhavani (P) 5. Bhavani (Thottipalayam) (P) 6. Brahmana Peria Agraharam (P)	150,712
6. Zone - 6	Tiruppur Conurbation	1. Tiruppur (M) 2. Avanashi (P) 3. Velampalayam (P)	97,965
7. Zone - 7	Coimbatore Conurbation	1. Coimbatore (M) 2. Kurichi (P) 3. Singanallur (P) 4. Uppilipalayam (P) 5. Peelamedu (P) 6. Kaniamuthur (P) 7. Ganapathi (P) 8. Vellalur (P) 9. Madukkarai (N.P) 10. Sulur (P) 11. Thondamuthur (P) 12. Karamadai (P) 13. Mettupalayam (M)	501,746

LIST OF CONURBATION ZONES IN MADRAS STATE (Contd.)

S. No.	Name of the conurbation	Towns included in conurbation	Total population in 1961
1	2	3	4
8. Zone - 8	Pollachi-Udumalpet Conurbation	1. Pollachi (M)	128,163
		2. Kottur (P)	
		3. Vettaikaranpudur (P)	
		4. Anamalai (P)	
		5. Udumalpet (M)	
9. Zone - 9	Coonoor-Ootacamund Conurbation	1. Ootacamund (M)	123,869
		2. Coonoor (M)	
		3. Kotagiri (P)	
		4. Wellington (Cantt)	
		5. Jagathala (P)	
		6. Konakkarai (P)	
		7. Cordite Factory in Aravankadu (N.P)	
10. Zone - 10	Cuddalore Conurbation	1. Cuddalore (M)	120,090
		2. Nellikuppam (P)	
		3. Panruti (P)	
11. Zone - 11	Thanjavur-Kumbakonam Conurbation	1. Thanjavur (M)	288,815
		2. Kumbakonam (M)	
		3. Tiruvadamarudhur (P)	
		4. Aduthurai (P)	
		5. Darasuram (P)	
		6. Valangiman (P)	
		7. Papanasam (P)	
		8. Ayyampettai (P)	
		9. Tiruvaiyaru (P)	
		10. Ammapettai (P)	
		11. Vallam (P)	
		12. Anakudi Tirunageswaram (P)	
12. Zone - 12	Tiruchirapalli Conurbation	1. Tiruchirapalli (M)	368,940
		2. Golden Rock Rly. Colony and	
		3. Golden Rock (P)	
		4. Srirangam (M)	
		5. Lalgudi (P)	
		6. Manachanallur (P)	
		7. Puvalur (P)	
		8. Abishekapuram (N.P.)	
13. Zone - 13	Madurai Conurbation	1. Madurai (M)	490,882
		2. Madakulam (P)	
		3. Tirupparankunram (P)	
		4. Avaniapuram (P)	
		5. Thallakulam (P)	
		6. Ponmeni (P)	
		7. Sathamangalam (P)	

LIST OF CONURBATION ZONES IN MADRAS STATE (Contd.)

S. No.	Name of the conurbation	Towns included in conurbation	Total population in 1961
1	2	3	4
14. Zone - 14	Cumbum Valley Conurbation	1. Cumbum (M)	220,200
		2. Periyakulam (M)	
		3. Allinagaram (P)	
		4. Bodinayakanur (M)	
		5. Thevaram (P)	
		6. Kombai (P)	
		7. Uttamapalayam (P)	
		8. Chinnamanur (P)	
		9. Gudalur (P)	
15. Zone - 15	Karaikudi Conurbation	1. Karaikudi (M)	95,645
		2. Devakottai (P)	
		3. Kottaiyur (P)	
		4. Kandanur (P)	
		5. Pallathur (P)	
		6. Kanadukathan (P)	
		7. Puduvayal (P)	
16. Zone - 16	Tirunelveli Conurbation	1. Tirunelveli (M)	190,048
		2. Palayamcottai (M)	
		3. Melapalayam (M)	
		4. Tachchanallur (P)	
17. Zone - 17	Ambasamudram Conurbation	1. Ambasamudram (P)	112,072
		2. Vikramasingapuram (P)	
		3. Kallidaikurichi (P)	
		4. Cheranmahadevi (P)	
		5. Pattamadai (P)	
		6. Viravanallur (P)	
18. Zone - 18	Tuticorin Conurbation	1. Tuticorin (M)	220,539
		2. Milavittan (P)	
		3. Sawyerpuram (P)	
		4. Eral (P)	
		5. Arumuganeri (P)	
		6. Kayalpattinam (P)	
		7. Tiruchendur (P)	
		8. Paramankurichi (P)	
		9. Udangudi (P)	
		10. Kulasekarapattinam (P)	
		11. Padukapathu (P)	

An attempt was then made to study the factors facilitating its growth and its pattern. Has a nuclear town expanded and sprawled around, absorbing rural parts? Have more than one town done so? Has the expansion taken place on radical lines or in a linear fashion along trunk roads or in a square pattern centering round a temple or business locality? Has anything impeded its growth? Is it systematic or sporadic? These points are answered in an analysis of the 18 zones in Madras State.

A map showing the conurbation zones is also given.

Zone 1–The Madras Metropolitan

It is the most important and extensive conurbation zone in the State. Its importance arises partly out of the historic factors and partly out of the strategic position it has enjoyed. It contains the State Capital and a major port. It is the third biggest city in India. Delhi has more population than Madras, but Delhi is a collection of a number of units including rural. Although places like Tiruvattiyur, Mylapore and Tiruvanmiyur now included in the zone have been famous in olden days, Madras has no claim to be considered as a city grown around an historical institution like Madurai or Tiruchirapalli. It was a village when the British occupied it in 1640 and constructed Fort St. George. It was at the invitation of the Raja of Chandragiri that the British preferred to settle down in Madras in preference to Masulipatam. It was inevitable that a port should be established near the fort as the strength of the British depended on its maritime supremacy and its occupation of Madras was dictated by the needs of trade. The commerce of the south in the 18th and 19th centuries was centred around this area. Foreign commercial houses established their headquarters. This resulted in the formation of George Town, known as Black Town in the earlier days of British rule. Roads coming from out-lying places converged at the point known as Parry's Corner lying between the Port and the Fort. The South Beach Road along the coast, Mount Road, Poonamallee High Road and Calcutta Trunk Road branch from this point. The Railway lines also converged somewhere near this point. As Madras grew in importance, it started growing along these radial roads and railway lines and in this process the City engulfed the nearby villages of Chepauk, Triplicane, Mylapore and Teynampet. At a later stage, Saidapet, Kodambakkam and Perambur villages were also engulfed. The City limits got extended in the years 1931, 1945 and 1946.

Formerly, the chief business centre was China Bazaar, now known as Subash Chandra Bose Road. But Mount Road also developed as another important shopping centre. Places of entertainment and eating houses were established on this road. Today, these two localities, China Bazaar and Mount Road continue to be the chief places for shopping and entertainment though each major residential locality had developed its own shopping centres. A certain decentralisation of shops has taken place with the growth of Pondy Bazaar, Luz Corner, Pycrofts Road, Purasawalkam High Road and Kodambakkam High Road. As business activities got intensified in the original areas of China Bazaar, Mount Road and Walajah Road, residential areas got converted into business centres and residences moved to out-lying areas. Pockets of vacant lands in the City first developed as residential localities. With their development in the City, in the decade 1941 to 1951 slums have grown around such residential localities. The second stage followed with the development of neighbourhood areas in the outer fringes of the City. Housing units have been noticed in Adyar, Kodambakkam-Pudur, Shenoynagar and Perambur.

Availability of power and water supply, proximity of a major port, the existence of communication and marketing facilities facilitated the location of many industries, big and small in Madras. They are found chiefly in the north and south. In the West, the film industry found its root and began to expand. These industries in turn attracted technicians, workers and traders. Housing colonies were established in vacant spaces lying between industrial establishments in the north and the south. Small towns grew up all around Madras and formed continuous stretches. As the scope for civic amenities to these areas was restricted, no attempt was made to expand the city limit so as to cover the satellite towns. In actual practice, all towns along the Madras City formed one single complex unit. The growth was sporadic and not on a

well regulated plan, nor did the Corporation extend its limits to include them. No master-plan has been prepared for their development. No ring roads have been formed connecting these satellite towns. The communication between them has to pass through Madras. As regards movement of workers employed in industries in the outskirts, many still continue to live in Madras and go to their work spot by electric trains or by buses. In turn, many working in Madras live in the outskirt towns.

The City is cut into several irregular segments by railway lines and water courses like the Cooum river, Adyar river and the Buckingham Canal. These water courses create serious problems of sanitation. Today, they have created traffic problems in the sense that movement from one sector to another has been rendered difficult by the absence of adequate number of bridges. It will not be incorrect to say that the development of the city has been impeded by the winding water courses.

In 1901, Madras had a population of 541,167. Tiruvattiyur, Pallavaram, St. Thomas Mount and Poonamallee were classified as urban. The entire population of these towns in that year was 594,396. In the next two decades 1910-11 and 1911-21, these towns recorded an increase of population by 1.6% and 3.9% respectively. In 1931, Alandur was included as an urban area and the population increase recorded in the zone was 23.4%. In 1941, Villivakkam was treated as an urban area and the increase in the decade 1931-41 was 20.1%. The highest population increase was recorded by Madras Metropolitan Zone in the decade 1941-51 with 65.8%. During this year, Tambaram and Kunrathur were treated as urban. In 1961, the adjoining areas of Avadi, Ambathur, Anakaputtur, Issa Pallavaram, Nekkundram, Erukkancheri, Palavanthangal, Koyambedu, Meenambakkam, Tirusoolam, Selaiyur and Eranavur were included as urban areas. The population increase in the decade 1951-1961 in the zone was, however, 26.1%.

This has been to some extent caused by the disintegration of Madras City in that it lost its political importance as the capital of a large area of Madras State, comprising parts of the present Andhra Pradesh, parts of Kerala and parts of Mysore.

The biggest industrial unit located in the city is the Buckingham and Carnatic Mills in North Madras. The Integral Coach Factory is on the northwestern corner. Other industrial concerns established in the last two decades are mostly in the north and south of the City. No extension of industries has taken place on the western side along the Bangalore Road. The present trend of future industrial expansion is on the south along the trunk road and the railway line. The industries started in and around the City are the following:-

Textile Mills
Iron and Steel founderies
Electrical and Transport equipment including motor engines and vehicles, motor cycles, cycles.
Rubber tyres and tubes
Leather articles
Glass-ware industries
Railway Coach Factory etc.

The percentage distribution of the workers in the various industrial classifications is as follows:-

1	Cultivation ...	0.4%
2	Agricultural Labour	0.4%
3	Mining and Quarrying etc.	1.8%
4	Household Industry	3.3%
5	Manufacturing	24.8%
6	Construction	4.2%
7	Trade and Commerce	18.1%
8	Transport, Storage and Communications	11.4%
9	Other Services	35.6%

Next to "Other Services", "Manufacturing" is most important. "Trade and Commerce" has also a high place. But "Other Services" include also a large number of casual labourers who have no fixed place of work and as such these areas can be classified as manufacturing and trade centres.

Due to paucity of space within the city proper, large scale establishments tend to be located outside the city limits. It has to some extent helped the growth of urban rings around the city. It has within its orbits many of the newly started industries like iron and steel, electrical and transport equipment, motor engines, rubber tyres and tubes and leather tannery. But extension of the outer fringes of

the City has not continued. It is intermittent and interspersed with large chunks of rural areas. One of the factors which has operated against the extension of the City unlike Bombay and Calcutta is the shortage of adequate supply of water. Another factor is the lack of easy communication with the out-lying parts. If these two factors are taken into account and adequate steps planned, the industrial development of Madras urban area will be much faster than what it is to-day. Again, Madras had a trade background. Its foreign trade has been considerably impeded by lack of imports and exports, owing to restrictions imposed by the Government of India from time to time. The third factor which has warped the industrial development is the absence of coal in this area. Coal has to be imported at a high cost from Bihar.

Zone 2 - Vellore-Ranipet

Vellore is of historical importance and has an old fort built by Tippu Sultan and which is still in tact. It is located on the southern bank of the Palar river and is the headquarters of North Arcot district. It is an important business centre for trade in grains, pulses and jaggery. The location of the American Mission Hospital has given it an All-India fame in the field of medicine. The hospital is located in the heart of the town and the college attached to it is at the south of the town at a place called Torappadi. 3 miles to the north of Vellore is Katpadi Railway Junction lying within the Panchayat limits of Darapadavedu. The area lying between Vellore and Katpadi Junction has been developed into a township called Katpadi township. Konavattam is a growth of Vellore town on the west and Sathuvacheri on the east. About 15 miles to the east of Vellore is the historical place of Arcot lying on the Southern bank of Palar, made famous by its defence by Clive. On the opposite bank is Ranipet, also a town of historical importance. Arcot is a centre of trade for paddy grown in the surrounding areas. Ranipet besides having a number of tanneries, also has the fertilizer factory and ceramic factory belonging to Parry & Co. Two miles further east of Ranipet is Walajapet which is the headquarters of the taluk of the same name. This place is noted for its fine woollen rugs. In between Arcot and Vellore is Visharam town which owes its importance to the number of tanneries located there. In all these towns Muslims dominate and pursue the occupation of tanning hides and skins. Beedi manufacturing is another industry also widely pursued.

In 1901, Vellore was a third grade municipality with a population of 43,537. Arcot, Ranipet and Walajapet were small towns. In the next decade Visharam was also treated as a town and the total population of the zone increased by 18.8%. In the subsequent decade, the increase in population was nominal, 2.9%. The decade 1921-31 saw an increase of 18.0% with no additional increase in the number of towns. The subsequent decade recorded an increase of 22.1% in population. The decade 1941-51 recorded an increase of 35.9% in population. In the last decade, the increase was 24.4% and four more towns were added to the group.

The tanning industry has made it necessary for people in these towns to move from one place to another. They are linked by proper facilities of transport.

The growth of Vellore town was linear from north to south. Development on the north is impeded by the river Palar and on the west by the presence of fort and the railway line and on the east by a hillock. So the growth was directed towards the south. Konavattam and Sathuvacheri which were neighbouring villages have grown into towns so as to touch Vellore on the west and east. Visharam and Walajapet which are situated on the trunk road had developed linearly on either side of the trunk road. Darapadavedu is growing along the railway junction.

Initially the growth of the conurbation began with two separate nuclei, one centering around Vellore and another around Ranipet. These two are now linked together along with Visharam to form a stretch.

The percentage distribution of workers engaged in the various industrial classification is as follows:-

1	Cultivation	3.0%
2	Agricultural Labour	2.9%
3	Mining and Quarrying etc	1.0%
4	Household Industry	12.7%
5	Manufacturing	25.9%
6	Construction	2.9%

7 Trade and Commerce 18.2%
8 Transport, Storage & Communications 6.8%
9 Other Services 26.6%

"Other Services" occupies the first place and "Manufacturing" ranks next. The distribution in "Trade and Commerce" and "Household Industry" are also appreciable.

Zone 3 – Vaniyambadi-Ambur

This is a small zone with two nuclear towns lying 10 miles apart. Vaniyambadi and Ambur are similar in character and engage in similar occupations. The main occupation of these towns is tanning of hides and skins. Muslims form the predominant community of the towns. Udayendram, Devasthanam and Jaffarabad are small villages which have grown as towns around Vaniyambadi.

The population of Vaniyambadi and Ambur in 1901 was 12,005 and 15,903 respectively. The increase of population in the next decade was 38.6%. It remained more or less stationary in the decade 1911-21. In 1931, the increase was 20%. 1941 recorded an increase of 33.6% and in 1951, 25%. In 1961 the increase was 18.5%. There was addition to the number of towns only in 1961.

The growth of both the towns is along the Madras-Bangalore Trunk Road bisecting these towns.

From the classification of workers in the zone, the following three emerged as the most important:

1. Manufacturing other than Household Industry 29.7%
2. Other Services 26.6%
3. Trade & Commerce 21.4%

The two towns are connected both by road and rail. The communication facilities are easy. Buses are frequent. The Government Wool Processing Centre and a number of tanneries are located on the road connecting these two towns. As the prospects of the tanneries in the future are limited, the zone is not likely to grow unless some other industry is planned to be located in the district.

Zone 4 – Salem

This conurbation zone comprises of Salem which is a Class I town, Suramangalam, Jarikondalampatti and Omalur. The importance of Salem is due to the handloom industry largely practised in the town itself. It is also the headquarters of Salem district. A few textile mills have been established near Salem in the last two decades. A large volume of business is transacted in handloom goods and grains.

From a Class II town in 1901 with a population of 70,621, Salem has now grown into a large town with a population of 249,145. The growth in population is marked in the decades 1921-1931, 1941-51 and 1951-61. The zone has a decline in the decades 1901-11 and 1911-21.

This zone had a single town in 1901. No progress in the number of towns was seen till 1941 when a Class VI town was included. Two towns, one in Class IV and one in Class V were added in 1961. The old town of Salem is linear shaped extending from west to east. To the north-west of it is Salem Junction situated in the Suramangalam panchayat. It has now become a contiguous stretch of Salem town. A central road runs throughout the length from Suramangalam to the easternmost part of Salem and serves as a life line for the traffic. The recent extensions are however, to the south and north of the old town. They are a little spread out. The density of the population of the conurbation is, however, high and is second to Madras with 20,901 persons per sq. mile. The development of town, especially the old one is sporadic. The streets are narrow and they are not formed according to any plan. The growth of the extensions has been planned only in a few lay-outs and that too within limited pockets. As the railway line passes across the town from west to east, the roads are cut by a number of level crossings. Added to it is the presence of a dirty jungle stream flowing right across the town. Formerly the railway line extended only from the junction to Salem Town. It has now been further extended to Vriddhachalam Junction. The people within the conurbation chiefly use the town buses to move from one place to another. Sometimes they also use the railway.

The chief industry of this zone is handloom weaving. The following is the percentage distribution of the workers in the various industrial classifications:

1. Cultivation 1.6%
2. Agricultural Labour 1.1%

3.	Mining and Quarrying etc	0.8%
4.	Household Industry including weaving	36.1%
5.	Manufacturing	17.5%
6.	Construction	2.0%
7.	Trade and Commerce	15.7%
8.	Transport, Storage & Communications	5.2%
9.	Other Services	20.0%

It is seen that household industry which is chiefly handloom weaving occupies the first place. "Other Services" occupies the second and "Trade and Commerce" the third. It is the one zone in which no industrial development has taken place nor has the growth been according to what has happened in other important cities like Bombay and Calcutta.

Zone 5 – Erode-Bhavani

Erode is an important trade centre in Coimbatore district dealing in commodities like grains, vegetable oils, turmeric, groundnut and handloom fabrics. It is an important railway junction. Bhavani and Erode are both headquarters of taluks. Bhavani lies 10 miles north to Erode near the confluence of the rivers Bhavani and Cauvery. It is noted for its carpet weaving. It is an important centre of pilgrimage. Rice milling and vegetable oil extraction are two important activities. Kumarapalayam which lies in Salem district adjoins Bhavani, but is separated by the river Cauvery. These two places are connected by a bridge. Kumarapalayam is also noted for its handloom industry. Recently a textile mill has been established here. There is frequent movement of people between Bhavani and Kumarapalayam and a lot of business is transacted between the two towns. Brahmana Peria Agraharam lying between Bhavani and Erode has a large number of tanneries. These three towns form a cluster having trade connections with each other. Business people and workers move freely from one part of the zone to the other. They are connected by bus transport.

The growth of Erode has taken place in all directions excepting east, on which side a big irrigation canal flows. The rice and oil mills are located mostly along the north-western direction. The growth on the southern direction is due to the location of the railway junction and the colonies attached to it. As Bhavani town lies between the two rivers, the growth is entirely in the northern direction. The rice and oil mills are located only in the north. Kumarapalayam which lies on the eastern bank of the river Cauvery has grown towards the east along the road to Salem.

The percentage distribution of workers among the various industrial classifications is as follows:

1.	Cultivation	11.4%
2.	Agricultural Labour	5.9%
3.	Mining and Quarrying etc.,	1.2%
4.	Household Industry	8.8%
5.	Manufacturing	20.1%
6.	Construction	4.0%
7.	Trade and Commerce	16.2%
8.	Transport, Storage and Communications	7.3%
9.	Other Services	25.1%

It is seen that "Other Services" occupies the first place and "Manufacturing" the second. The density of population in the zone is comparatively low, only 3,351 persons per sq. mile.

Zone 6 – Tiruppur

This zone is small. Tiruppur municipality is the only important town in the zone. Its importance is due to its central location in the cotton growing area. In the earlier stages, raw cotton was ginned, pressed and sent to other textile centres like Bombay and Ahmedabad for spinning. Later spinning mills came to be located in Tiruppur itself. Its importance today is not so much due to the location of textile mills, but due to the location of many hosiery factories engaged in producing banians and other articles. A number of big rice mills are also located in Tiruppur. Though Tiruppur lies in the midst of a dry tract, the flourishing of the rice mill industry is due to the fact that it lies on the communication line between the paddy producing centres of Thanjavur and the consuming centres in Kerala.

Velampalayam adjoins Tiruppur in the north. It is noted for the brass vessels manufactured on a cottage industry scale. Avanashi which is the headquarters of a taluk is only 8 miles from Tiruppur. A number of rice mills and ginning factories are located in it. An ancient temple is also found there. The towns in the zone are connected by buses and there is a large scale movement of workers from one place to another.

The old town of Tiruppur was situated to the south of the Noyil river which flows from west to east. The railway station is situated a mile to the north of the river. The earlier growth of the town was in the vast space between the river and the railway line. The textile mills and many ginning factories are located on the eastern side of this land between the river and the railway line. Subsequently the growth of the town was to the north of the railway line and to the south of the old town. The town has now developed in three segments, one lying north of the railway line, another lying between the railway line and the river and the third to the south of the river. The town is growing fast.

In 1901, Tiruppur was the only town in the zone, with a population of 6,056. The increase of population in the town in the decades 1901-11, 1911-21, 1921-31 were 55.7%, 15.1% and 66.4% respectively. In 1941, Avanashi was treated as urban. The increase in the population of the zone in that decade was stupendous, being 117.0%. The increase in 1941-51 was 54.3%. In 1951-61, Velampalayam was treated as a town and the increase in population of the zone was 62.0%. Shortly, the zone may develop towards the south to include Palladam town also.

The percentage distribution of the workers is as follows :—

1.	Cultivation	3.6%
2.	Agricultural Labour	1.6%
3.	Mining and Quarrying etc	0.5%
4.	Household Industry	13.6%
5.	Manufacturing	35.5%
6.	Construction	3.4%
7.	Trade and Commerce	14.9%
8.	Transport, Storage and Communications	3.5%
9.	Other Services	23.4%

Manufacturing is the most important activity. In fact, the percentage distribution in this industrial classification is the highest for any conurbation zone in the State.

Zone 7 - Coimbatore

The growth of this conurbation in the last six decades is steady and rapid. From a single town of the size of 50,000 population, it has now grown to a large complex of 13 towns comprising a population of about 5 lakhs. The length of the conurbation from north to south can be fixed at 30 miles and from west to east at 15 miles.

Coimbatore is not an historical or ancient city. It is not also a sea-coast town. Actually, it is in the interior with no great communication facilities. It is not a nodal point for communication lines. But the growth of the town and its industrial importance necessitated laying of communication lines connecting it with other centres.

Its salubrious climate made the Britishers select it as the district headquarters. As it happened to be the hinterland of a vast cotton growing area, one or two European industrial pioneers thought of the possibility of starting a few textile mills. The Stanes Mill was the first to be established in the heart of the city. This attracted the attention of local entrepreneurs who saw the possibility of starting a number of textile mills around Coimbatore. The availability of cheap electric power from Pykara, gave the impetus and the industry began to grow from 1930 onwards. Ever since, it has grown steadily in the last 20 years, other industrial expansions like foundry - engineering, textile machine-tool industry, cement manufacturing have been started all around Coimbatore because of the pioneering efforts of the enterprising industrialists of Coimbatore. The zone can now be described as the second biggest industrial one in the State, the first being Madras Metropolitan zone. The growth of the conurbation zone can be attributed to the following factors :—

1. Location of Coimbatore as the district headquarters ;
2. Its climate and better living conditions ;
3. Availability of entrepreneurs ;
4. Availability of raw materials like cotton, lime stone etc. in the vicinity ; and
5. Location of the Agricultural College and other technical institutions and colleges in and around Coimbatore.

In 1901, Coimbatore was the only town in the zone with a population of 53,080. In 1911, the population of the town decreased to 47,007 probably because of plague epidemic. In 1921, Kurichi panchayat which included Podanur Railway junction was declared as a town. Mettupalayam which is at a distance of 23 miles to the north was also made a town in 1921. The

rise in the population of the towns in the conurbation during 1911-21 was 84.3%. The next decade recorded an increase of 38.0%. In the decade 1931-41, several other places adjoining Coimbatore like Singanallur, Kuniamuthur, Peelamedu, Vellalur and Sulur grew on account of the location of mills and were declared as towns. The total increase of population in the zone during the decade was 73.5%. The decade 1941-51 recorded an increase of 51.8% in the population and in 1951-61 the increase was 59.4% The places which were declared as towns recently are Uppilipalayam, Ganapathi, Madukkarai, Thondamuthur and Karamadai. Mettupalayam is linked with Coimbatore by the location of a number of industries all along the road. Many villages lying along this road contain industrial establishments. They are likely to develop as urban areas in the near future.

The growth of Coimbatore town started towards the east in the earlier stages. The old town lying to the west of the railway line is a congested locality with narrow roads. The railway station at that time was facing west. The latter extensions to the east of the railway line have been better laid out and the location of the Government offices to the east shifted the importance of the town from west to east. Even the railway station was remodelled so as to face east. Avanashi Road on the east became an important shopping centre.

The growth after this was in the northern direction, the south being blocked by a chain of tanks. While the textile industry got expanded, the mills came to be established in the east, south and north and that favoured the formation of small towns on the outskirts of Coimbatore. The development of Coimbatore on the west was because of the location of the Agricultural College, the Forest College and the Sugarcane Breeding Station in that direction. Thus the town has expanded in all directions and the old town still continues to be the centre of business activity. The movement of persons from one part of the zone to another is mostly through the old city.

The growth of the town is rapid and the roads connecting the different parts have become too narrow to carry the heavy load of traffic. Congestion of traffic is noticed everywhere. The introduction of town buses is of recent origin and it cannot be said that the lay-out of the town and the formation of roads is suitable for the efficient and quick running of the town buses. The more popular mode of transport is the auto-rickshaw which can be found plying between all parts of the city.

The industrial classification and the percentage distribution of workers within the conurbation is as follows :

1.	Cultivation	2.9%
2.	Agricultural Labour	4.1%
3.	Mining and Quarrying etc.	2.1%
4.	Household Industry	6.2%
5.	Manufacturing	33.3%
6.	Construction	4.5%
7.	Trade and commerce	14.4%
8.	Transport, Storage & Communications	5.8%
9.	Other Services	26.7%

It can be seen that "Manufacturing" occupies the first place and "Other Services" comes next. In "Manufacturing" textiles occupy a prominent place. The other articles manufactured are electric pumpsets, agricultural implements, textile machineries, radios, rubber and plastic articles, buttons, carbonic inks, paints, cement and cement products. The commodities covered by wholesale trade are textiles, foodgrains and foundery articles.

Zone 8 - Pollachi-Udumalpet

It comprises of two nuclear towns of Pollachi and Udumalpet lying at a distance of 18 miles apart. Pollachi is a business centre which has one of the biggest weekly markets in the State. The commodities are groundnut, grains and oil. On the outskirts of the town, a number of oil and rice mills have been located and the expansion of the town has taken place in all directions. As it is close to the foot of the Anamalai hills, it also serves as a distribution centre for the commodities brought from Valparai plantation areas and for the essential articles needed at that place. Recently the starting of the Parambikulam-Aliyar Project has given added importance to the town. Kottur, Anamalai and Vettaikaranpudur which are within a radius of 10 miles have gained importance only because of their proximity to Pollachi.

Udumalpet on the other hand is in the midst of a cotton growing area and its importance arose on account of the location of a few textile mills near the town. Recently a sugar mill has also been started and the villages adjoining Udumalpet are growing up. A large number of mills have been established on the road connecting Udumalpet and Pollachi and the two towns are moving closer to each other. Pollachi and Udumalpet are connected both by rail and road. Buses are frequent between these places.

The population of Pollachi and Udumalpet in the year 1901 were 8,958 and 10,503 respectively. Pollachi has now grown to the size of about 55,000 and Udumalpet to the size of about 28,000. The population of all the towns within the zone is 128,163. The percentage distribution of workers is as follows:

1.	Cultivation	6.52%
2.	Agricultural Labour	11.47%
3.	Mining and Quarrying etc,	1.56%
4.	Household Industry	3.40%
5.	Manufacturing	14.57%
6.	Construction	5.51%
7.	Trade and Commerce	15.62%
8.	Transport, Storage & Communications	5.72%
9.	Other Services	35.63%

It is seen that "Trade and Commerce" is more than "Manufacturing", but "Other services" has much more importance than the other two.

Zone 9 – Coonoor-Ootacamund

This zone consists of a group of 7 towns in Nilgiri hills. Ootacamund, the chief of them is at an elevation of 7,500 feet. Next in importance is Coonoor lying at an elevation of 6,000 feet. These two towns are visited by persons from the plains as they are treated as summer resorts. Many other tourists also visit these places. Ootacamund used to be the summer headquarters for the Madras Governor. Even now the Governor moves to Ootacamund during summer. There are many high class hotels and tourist homes which make good business during the season. These towns are also important as collection centres for the plantation and other produces grown in the hills like tea, coffee, potatoes, English vegetables, eucalyptus, wattle-bark etc., Ootacamund is the headquarters of the district of Nilgiri and contains a number of offices. A Government Arts College was established in 1954. In Lovedale, which is closeby, there is a public school. Coonoor is a business centre. Pasteur Institute is located there. Close to it is Wellington which has a military station with a training centre attached to it. In Aravankadu, a Cordite Factory is located. Jagathala is adjacent to Aravankadu. Kotagiri owes its importance to potato trade. Konakkarai is adjacent to Kotagiri and is part of the town.

The development of these hill stations began early in the 19th century. The Britishers were very much interested in developing them as places of summer resort. In 1901, the population of Ootacamund was 18,596 and that of Coonoor 8,525. In 1911, Wellington was declared as a town with a population of 6,018. In 1921, the population of these three towns increased by 10.7%. In 1931, Kotagiri was declared as a town and the increase in the population of the zone for the decade was 40.9%. In 1941 the population of these four towns increased by 25% and in 1951 it increased by 31.3%. In 1961 Jagathala, Konakkarai and Aravankadu were declared as urban areas and the increase in population for the entire zone from 1951 to 1961 was 39.2%.

The distance from Coonoor to Ootacamund is 10 miles. Kotagiri is situated at a distance of 15 miles to the east of Coonoor. There is also a direct road from Kotagiri to Ootacamund. Aravankadu and Wellington are close to Coonoor and on the way to Ootacamund. Coonoor and Ootacamund are connected by rail and road. The other places are connected by road to each other. Buses run frequently. Local people move freely within the zone. The percentage distribution of workers in the zone is as follows :

1.	Cultivation	6.7%
2.	Agricultural Labour	6.3%
3.	Mining and Quarrying and plantation etc.	11.7%
4.	Household Industry	1.1%
5.	Manufacturing	11.6%
6.	Construction	2.8%
7.	Trade and Commerce	10.3%
8.	Transport, Storage and Communications	4.9%
9.	Other Services	44.6%

It is seen that "Other Services" occupies the first place with the largest percentage of workers.

Next is " Plantation " and the third place goes to "Manufacturing". A Government sponsored photo film manufacturing establishment is being constructed near Ootacamund on the road to Coonoor and this will complete the link between Ootacamund and Coonoor.

Zone 10 – Cuddalore

The chief town in this conurbation is Cuddalore, the headquarters of South Arcot district. It is a sea-coast town with a minor port. This place is also a railway junction. The new town goes by the name of Tiruppapuliyur. It was developed on the northern bank of the Gadilam river which flows through the town and has all the District Offices located in it. The railway junction is on the southern side of the new town at a distance of 3 miles. The town played an important role in the earlier British occupation and an old fort is located in it. Nellikuppam is another town at a distance of 10 miles to the west of Cuddalore. There is a big sugar factory located in Nellikuppam. The importance of the place is due to this factory. Panruti which is 10 miles further west deals in commodities like cashewnuts and dolls. All these three towns lie on the State Highway and they are also linked by railway. Movement of the people from one place to another is frequent.

All the three places were towns even in 1901. In 1911, they recorded an increase of 6.7% in population. But in 1921 they recorded a decrease of 8.9%. The increase of population in the next four decades were 10.7%, 4.2%, 15.5% and 15.1% respectively.

In this zone 32.6% of the workers are classified under "Other Services". Next to it, 15.5% of the workers come under "Manufacturing". The percentage of workers under " Trade and Commerce" is 14.7%. The development recorded by this zone during the decades 1901 to 1961 is not appreciable.

Within the influence of this zone will fall Pondicherry lying at a distance of 14 miles to the north of Cuddalore. For our purposes it has not been included as it forms another independent territory.

Zone 11 – Thanjavur–Kumbakonam

This zone consists of 12 towns lying within a radius of 30 miles. Kumbakonam and Thanjavur are the most important towns lying on either side. This zone is located in the fertile area of the Cauvery delta known as the granary of Madras State. Thanjavur is the headquarters of the district and Kumbakonam is an important business centre. Thanjavur was the capital of the Cholas for a long time. Later it became the capital of the Nayak and Maharatta kings. The Brahatheeswarar temple and the palace are places of tourist attraction. The Saraswathi Mahal Library is located inside the palace. The old city consisted of two forts, one larger and another smaller and two suburbs Manambu Chavadi in the south-east and Karunthattangudi on the north. The old palace and the residence of high class Hindus lay within the big fort. The Brahatheeswarar temple is located within the smaller fort. The walls of the larger fort have been demolished mostly and the moat filled up. The railway station was constructed at a place south-east of the old town and the area lying between the old town and the railway station developed as a business centre. The residential extensions are generally towards the south and west. In the north, two rivers, the Vadavar and Vennar flow from west to east, practically arresting the growth of the town in that direction. As the town is dissected into a number of segments by the two rivers, railway line and the Grand Anicut Canal, many traffic bottlenecks are felt within the town.

Kumbakonam which is also an ancient city and at one time the capital of the Cholas, contains a number of temples and the famous Maha Maham tank. The old town is well formed and the new additions to it are mostly sporadic growths. It is famous for the brass vessels manufactured within the town and the cotton and silk handloom sarees woven. It contains a number of rice mills and trade in paddy is an important item of its activity.

In 1901, the zone contained six towns of which two were important. The other towns besides Thanjavur and Kumbakonam were Tiruvadamarudhur, Ayyampettai, Tiruvaiyaru and Vallam. Perhaps at that time, Kumbakonam and Thanjavur were not so well linked economically and socially as they are now. In 1911, these towns recorded an increase of 6.2% in population and in 1921 it recorded a decrease of 3.1%. In

1931 Valangiman was included as urban area and the population of the towns in the zone increased by 9.9%. In 1941, Papanasam was declared as an urban area and the increase in population amounted to 7%. In 1951, the population increase recorded was the highest, 35%. In 1961, four other towns - Aduthurai, Anakudi Tirunageswaram, Darasuram and Ammapettai *were declared as urban areas and the population* increase in the zone came to 15.2%. The smaller towns lying between Kumbakonam and Thanjavur became important because they served as collection centres for the paddy produced in the area. They also contain famous ancient temples. Thanjavur and Kumbakonam are also connected by railway and roads lying within the zone. The density of population of the conurbation zone is 8,634 persons per sq. mile.

The percentage distribution of workers in the zone is as follows :

1.	Cultivation	6.1%
2.	Agricultural Labour	6.9%
3.	Mining and Quarrying etc.	1.7%
4.	Household Industry	14.0%
5.	Manufacturing	14.5%
6.	Construction	3.5%
7.	Trade and Commerce	17.4%
8.	Transport, Storage & Communications	6.4%
9.	Other Services	29.5%

It is seen that "Other Services" occupies the first place in the number of workers and the second place goes to "Trade and Commerce". In Kumbakonam, cotton and silk weaving is prevalent to some extent. Brass and other metal vessel manufacture is also practised in Kumbakonam.

Zone 12 - Tiruchirapalli

This zone centres around Tiruchirapalli, the headquarters of the district. It is an ancient city of historical importance. Woraiyur which was part of the town was at one time the headquarters of the Chola kings. The town lies on the southern bank of the Cauvery. Its importance in the last century grew further when the Railways located their headquarters in Tiruchirapalli. Attached to *this is the workshop at Golden Rock.* The location of educational institutions run by the Christian Missionaries gave further importance to the city. On the northern bank of the Cauvery opposite to Tiruchirapalli is Srirangam, with a famous Vishnu temple. Lalgudi is a taluk headquarters town in the north-eastern direction which is connected to Tiruchirapalli by road and rail. Puvalur is another town close to Lalgudi. The Dalmia Cement Factory is located near these towns. Manachanallur is a rice milling centre seven *miles to the north of Tiruchirapalli.*

The old town of Tiruchirapalli was located around the fort. Subsequent extensions were on the south and the west and engulfed old areas like Woraiyur, Pandamangalam, Tennur and Sengulam. The town is now a lengthy one from north to south and most of the roads run parallel from north to south. Because of the existence of railway lines passing through the town and converging at the southern point, many points of traffic blocks are found. The roads in the old town are narrow and cannot admit any traffic loads. But frequently buses run which are widely used by the people for moving from one part of the town to another. The town buses run upto Srirangam and even north of it. The people also make use of railways to move within the zone.

In 1901, Tiruchirapalli with a population of 104,721 and Srirangam with a population of 23,039 were the only two towns in the area. Their population increased by 16.1% during the decade 1901-11. In 1921, two other towns, Lalgudi and Manachanallur were declared as towns and the total population of the towns in the zone increased by 12%. In 1931, Golden Rock Railway Colony was declared as urban and the population in the zone increased by 18.7%. In 1941, the population of the towns within the zone increased by 9.9%, with no additional increase in the number of towns. In 1951, Puvalur was declared as urban and the population increase in the zone was 47.7%. In 1961, Abishekapuram was declared as urban and the population increase was 15.3%. The density of population of the zone is 10,819 persons per square mile.

The percentage distribution of the workers in the zone is as follows :—

1.	Cultivation	3.4%
2.	Agricultural Labour	3.7%
3.	Mining and Quarrying etc.	1.6%

4. Household Industry 6.4%
5. Manufacturing 25.5%
6. Construction 3.8%
7. Trade and Commerce 17.7%
8. Transport, Storage & Communications 11.7%
9. Other Services 26.2%

The first place is held by " Other Services " and the second by " Manufacturing ".

Zone 13 – Madurai

This zone centres around Madurai, the second largest city in the State. It is an ancient city of great historical importance. It was the capital of the Pandian kings for a considerable period. Later it became the capital of the Vijayanagar kings. It was the centre of Tamil learning for more than two thousand years. The old town is well laid out and centres around the famous Meenakshiamman temple. The streets in the old city are in concentric squares with radial roads converging towards the temple. The old city lay to the south of the Vaigai river which flows from west to east. When the railway was extended to this town, the Junction was located on the western fringe of the old city. The city then started expanding in the later part of the 18th century and in the first part of the 19th century. The factors which induced the development of the town are the following :—

1. It is the meeting place of several roads and railway lines from a large number of towns within a radius of 100 miles.
2. It is the headquarters of two districts.
3. It is an educational centre for higher studies.
4. A few big textile mills came to be located near the town, and
5. It is a tourist centre.

When the city started expanding, first it developed in the southern direction upto Tirupparankunram. No expansion was possible in the northern direction as the Vaigai river acted as a barrier. But when the Government offices came to be located at a place north of the river, residential extensions came up on that side. The Government Headquarters Hospital and American College are also located in the north. When the textile industry expanded in the last decade, several mills were established on the main roads leading to Dindigul, Tirumangalam and Sivaganga from Madurai. The growth of the city is now on all the four sides and the temple acts as the centre of the conurbation. The shopping centres also continue to be around the temple. The present density of population in the conurbation is 14,303 persons per sq. mile. This is the third densest conurbation in the State, the first two being Madras and Salem.

In 1901, Madurai municipality was the only town within the conurbation zone with a population of 105,984 persons. The increase in population in the decade 1901-11 was 26.6%. In the next decade although Tirupparankunram came to be declared as an urban area, the population increase in the zone was only 7.5%. The next three decades, 1921-31, 1931-41, and 1941-51 recorded increases of 30.3%, 30.4% and 51.4% respectively in the population with no increase in the number of towns within the conurbation. In the decade 1951-61, five more urban areas were added to the conurbation and the population increase was 32.4%. The spatial growth of the conurbation in the last decade is mainly due to the establishment of more textile mills.

Due to the Vaigai river and a number of railway lines in the City, a number of traffic blocks exist in the various points. The chief of these are the Vaigai bridge and the various railway level crossings in the City. The chief mode of transport from one point to another within the conurbation is the town bus which is efficiently run.

The percentage distribution of workers is as follows :

1. Cultivation 1.7%
2. Agricultural Labour 1.9%
3. Mining and Quarrying etc. 1.0%
4. Household Industry 12.0%
5. Manufacturing 28.1%
6. Construction 3.0%
7. Trade and Commerce 19.2%
8. Transport, Storage & Communications 7.1%
9. Other Services 26.0%

"Manufacturing" is the biggest industry in the conurbation.

Zone 14 – Cumbum Valley

The nine towns in the zone lie in the

Cumbum Valley through which the Vaigai river flows. All these towns lie in Periyakulam taluk. Periyakulam is the headquarters of the taluk. Bodinayakanur is the biggest town in the zone and lies near the hills. In these places, the produces grown in the adjoining hills are collected and marketted. Cardamom is the chief produce. In the plains, paddy and chillies are grown and exported to other places. A central road runs through the valley linking most of the towns. A railway line from Madurai goes up to Bodinayakanur.

In 1901, Periyakulam, Bodinayakanur and Uttamaplayam were the only three urban places in the zone. In 1911, the population of these places decreased by 5.1%. In the next decade, Chinnamanur and Cumbum were treated as urban areas and together the zone recorded an increase of 56.5% in population. In 1931, the increase in population was 89.9%. In 1941, 1951 and 1961 the increases were 6.9%, 22.4 % and 19.1% respectively.

The distribution of workers in the zone is as follows :—

1.	Cultivation	19.9%
2.	Agricultural Labour	13.7%
3.	Mining and Quarrying etc.	4.2%
4.	Household Industry	2.7%
5.	Manufacturing	6.2%
6.	Construction	1.6%
7.	Trade and Commerce	11.5%
8.	Transport, Storage & Communications	2.7%
9.	Other Services	37.5%

From this it could be seen that the area is completely devoid of any industry. The percentage of workers in "Cultivation" and "Agricultural Labour" is pretty high in this zone. The percentage of workers in "Other Services" is the highest.

Zone 15 – Karaikudi

It consists of a group of seven towns in the north-eastern part of Ramanathapuram district. The chief and central town in the zone is Karaikudi with a population of 43,698. Devakottai is at a distance of 10 miles south-east of it. The other five towns lie to the north of Karaikudi in a cluster. None of these towns contain any industry, but the chief force which knits these towns is the prosperous Nattukottai Chettiars who are the natives of these places. They have earned money in countries like Burma, Malaya and Singapore and have built extensive houses in their native towns. As the Nattukottai Chettiars are in a prosperous condition other people have come to work under them as clerks and servants. Tertiary workers form a high proportion. Due to the efforts of Dr. Alagappa Chettiar belonging to this community, a first grade College and a National Laboratory came to be established in Karaikudi and this has added to the importance of the town. In Puduvayal there are a few rice mills engaged in large scale hulling of paddy.

Karaikudi has a railway junction and is connected to Kottaiyur and Kanadukathan. The other places are linked by road. Buses and private cars are the chief mode of transport from one place to another.

In 1901, Karaikudi and Devakottai were the only two urban places in the zone. By 1911, they recorded an increase of 31.3% in population. In 1921, Kandanur was treated as an urban area and the increase in population of the zone was 68.4%. In 1931, Kottaiyur, Pallathur and Puduvayal were treated as urban areas and the population increase in the zone came to 39%. The increases of population in the decades 1931-41 and 1941-51 were 18.2% and 11.4% respectively. In 1961, Kanadukathan was also treated as an urban area and the increase in population of the zone during the decade was 11%.

The percentage of distribution of workers in the zone is as follows :

1.	Cultivation	8.9%
2.	Agricultural Labour	1.3%
3.	Mining and Quarrying etc.	1.4%
4.	Household Industry	7.9%
5.	Manufacturing	13.5%
6.	Construction	3.9%
7.	Trade and Commerce	19.1%
8.	Transport, Storage & Communications	3.8%
9.	Other Services	40.2%

It has to be noted here that the percentage distribution in "Other Services" is the second highest in the conurbation zones, the first being Ootacamund. The second place goes to "Trade and Commerce".

Zone 16 – Tirunelveli

Tirunelveli is an ancient city. It is the headquarters of the district. The town is centred around the temple located in it. The Railway Junction is located a mile to the east of the town. Palayamcottai lies further east beyond the Tambraparni river. The main Government offices are located in the Palayamcottai municipality close to the bridge on the river. Melapalayam was a weaving village lying two miles south of the Railway junction which has grown into a town. Tachchanallur is also a village which has been treated as a town and this lies north of the railway junction. For all these towns, the Tirunelveli Railway Junction is the central point and the growth of the conurbation has taken place in all the four directions. The main shopping centres are located near the Junction. Buses ply frequently between Tirunelveli and Palayamcottai and Tachchanallur to Melapalayam through Tirunelveli Junction. A little further north of Tachchanallur is Thalayoothu with its cement factory. West of Tirunelveli is Pettai with a spinning mill. These places are likely to grow into towns and fall within the conurbation.

In 1901, the population of Tirunelveli was 40,469 and that of Palayamcottai 39,545. The increase in these towns in the decade 1901-11 was 12.1%. In the subsequent decade the increase was 11.9%. In 1931, Tachchanallur area was treated as urban and the increase in population in the zone was 18.1%. In 1941, Melapalayam was also treated as urban and the population increase came to 11.3%. In 1951, the increase was 22% and in 1961 it was 18.1%. As Tirunelveli and Palayamcottai do not contain any big industry, the growth of population in the last two or three decades has not been steep as in the case of many conurbation areas.

The percentage distribution of workers in the zone is as follows:-

1.	Cultivation	5.9%
2.	Agricultural Labour	3.8%
3.	Mining and Quarrying etc.	1.4%
4.	Household Industry	27.5%
5.	Manufacturing	14.6%
6.	Construction	2.7%
7.	Trade and Commerce	14.5%
8.	Transport, Storage and Communications	5.5%
9.	Other Services	24.1%

"Household Industry" occupies the prominent place. The second place is occupied by "Other Services".

Zone 17 – Ambasamudram

This zone centres around Ambasamudram town. Adjoining on the south-eastern side is Kallidaikurichi. Vikramasingapuram is five miles distant from Ambasamudram on the western side beyond the Tambraparni river. Veeravanallur, Cheranmahadevi and Pattamadai are three small towns on the eastern side. Ambasamudram is the taluk headquarters and Cheranmahadevi is the Divisional headquarters. Many textile mills are located in Ambasamudram and Vikramasingapuram. Both these towns lie in the rich Tambraparni basin where paddy cultivation is widely practised. They also serve as collection centres for the paddy produced in the area. Pattamadai is also famous for the fine Korai mats manufactured there.

Even in 1901, Ambasamudram, Kallidaikurichi Cheranmahadevi and Veeravanallur existed as Class IV towns. In 1911, Pattamadai was also included as a town and the population of the zone increased by 12.5%. In 1921, the population recorded only a nominal increase of 1.3%. In 1931, Vikramasingapuram was treated as a town and the total increase in the population of the zone was 16.1%. The increases in 1941, 1951 and 1961 were 11.7%, 23.2% and 5.2% respectively. All these places are connected by rail and road. The popular mode of travel is by bus.

The following distribution of workers among the industrial classification shows that the first place is occupied by "Household Industry".

1.	Cultivation	16.0%
2.	Agricultural Labour	8.4%
3.	Mining and Quarrying etc.	2.5%
4.	Household Industry	26.2%
5.	Manufacturing	17.6%
6.	Construction	2.1%
7.	Trade and Commerce	8.4%
8.	Transport, Storage and Communications	1.5%
9.	Other Services	17.3%

In "Household industry", the main products are handloom fabrics and korai mats. A high percen-

tage of workers in cultivation is also found. No other conurbation zone has recorded such a high percentage under "*Cultivation*".

Zone 18 – Tuticorin

The Chief town in this zone is Tuticorin. It lies in the northern end of the conurbation. Most of the other towns lie along the sea-coast. Except Sawyerpuram, Eral and Tiruchendur all other towns are engaged in manufacture of salt and fishing. The communities engaged in these activities are the Nadars and the Paravans respectively. Tiruchendur which is centrally located in the zone is a railway terminus. A famous Murugan temple is located here which attracts a large number of pilgrims throughout the year. For all these towns, Tuticorin is the chief business centre. It contains a minor port. The ships which touch this port are berthed about three miles away and the merchandise are tran-shipped by tonis. These tonis which are large-sized boats are built in Tuticorin itself. These are widely used for coastal trade. Tuticorin is a commercial centre for cotton, salt, cured-fish and other products like fibre, palm-leaf products, crude drugs, Sennali (indigo), chunk and pearls. Two big textile mills are also located in Tuticorin.

The old Tuticoin town centred round the port. The subsequent extensions were on all the three sides of the port. The other towns within the zone are connected by road and buses ply frequently.

In 1901, the population of Tuticorin was 28,048. The other places which existed as towns in that year were Kayalpattinam, Tiruchendur and Kulasekarapattinam. In 1911, these four towns together recorded an increase of 17.1% in population. In 1921, Eral and Udangudi were treated as towns, but the population in the zone recorded a decrease of 8.5%. The towns which recorded decreases in that year were Tiruchendur and Kulasekarapattinam. In 1931 and 1941, the zone recorded an increase of 23.1% and 12.4% respectively. In 1951, Sawyerpuram and Arumuganeri were treated as towns and the increase in population of the zone came to 36.8%. In 1961, Milavittan, Padukapathu and Paramankurichi were also treated as towns and the increase in population of the zone was 26.9%. The present population of Tuticorin is 1,24,230. With the development of the port which is likely to take place, this zone will in due course record a tremendous increase in population.

The percentage distribution of the workers in the zone is as follows:

1.	Cultivation	4.0%
2.	Agricultural Labour	3.0%
3.	Mining and Quarrying etc.	8.2%
4.	Household Industry	11.4%
5.	Manufacturing	21.8%
6.	Construction	3.1%
7.	Trade and Commerce	16.2%
8.	Transport, Storage and Communications	11.0%
9.	Other Services	21.3%

It will be seen that "Manufacturing", "Other Services" and "Trade and Commerce" occupy predominant places in the industrial classification of workers.

TABLE V - 12

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns: I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 1 - The Madras Metropolitan Conurbation								
1. Madras (M.C.)	1,729,141							
2. Avadi (P)	13,050							
3. Kunrathur (P)	12,244							
4. Poonamallee (P)	11,900							
5. Tiruvattiyur (M)	37,571							
6. Tambaram (P)	33,500							
7. Alandur (P)	22,112							
8. Pallavaram (P)	16,253							
9. St. Thomas Mount-cum-Pallavaram (Cantt.)	15,790							
10. Villivakkam (P)	15,203							
11. Ambathur (P)	11,128							
12. Anakaputtur (P)	7,460							
13. Issa Pallavaram (P)	4,316							
14. Nekkundram (P)	3,325							
15. Erukkancheri (P)	3,131							
16. Palavanthangal (P)	2,266							
17. Koyambedu (P)	2,125							
18. Meenambakkam (P)	1,596							
19. Tirusoolam (P)	1,369							
20. Selaiyur (P)	829							
21. Eranavur (N.P.)	193							
Total	1,944,502	216	889	...	48	49	4	10

TABLE V-12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns: I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 2 – Vellore-Ranipet Conurbation								
1. Arcot (M)	25,029							
2. Ranipet (M)	22,974							
3. Visharam (P)	14,441							
4. Walajapet (M)	13,179							
5. Darapadavedu (P)	9,018							
6. Vellore (M)	113,742	24	531	...	224	129	103	13
7. Torappadi (P)	6,720							
8. Sathuvacheri (P)	6,371							
9. Konavattam (P)	2,648							
Total	214,122							
Zone 3 – Vaniyambadi–Ambur Conurbation								
1. Udayendram (P)	5,882							
2. Vaniyambadi (M)	42,048							
3. Devasthanam (P)	3,109							
4. Jaffarabad (P)	2,761	10	...	...	874	...	63	63
5. Ambur (M)	39,455							
Total	93,255							

TABLE V-12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns: I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 4 – Salem Conurbation								
1. Omalur (P)	7,151							
2. Salem (M)	249,145							
3. Suramangalam (P)	15,805	31	889	...	...	56	55	...
4. Jarikondalampatti (P)	8,184							
Total	280,285							
Zone 5 – Erode-Bhavani Conurbation								
1. Kumarapalayam (P)	24,757							
2. Bhavani (P)	15,860							
3. Bhavani (Thottipalayam) (P)	6,853							
4. Erode (M)	73,762	17	...	490	315	105	90	...
5. Erode (N.P.)	22,766							
6. Brahmana Peria Agraharam (P)	6,714							
Total	150,712							
Zone 6 – Tiruppur Conurbation								
1. Tiruppur (M)	79,773							
2. Velampalayam (P)	8,396	11	...	814	...	...	186	...
3. Avanashi (P)	9,796							
Total	97,965							

TABLE V-12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns					
			I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 7 – Coimbatore Conurbation								
1. Sulur (P)	9,903	56	571	...	225	174	30	...
2. Mettupalayam (M)	36,496							
3. Karamadai (P)	11,649							
4. Coimbatore (M)	286,305							
5. Kurichi (P)	28,407							
6. Singanallur (P)	24,674							
7. Uppilipalayam (P)	23,207							
8. Peelamedu (P)	18,437							
9. Kaniamuthur (P)	17,327							
10. Ganapathi (P)	14,176							
11. Vellalur (P)	13,277							
12. Madukkarai (N.P.)	12,488							
13. Thondamuthur (P)	5,400							
Total	501,746							
Zone 8 – Pollachi – Udumalpet Conurbation								
1. Pollachi (M)	54,369	14	...	424	221	355	...	...
2. Kottur (P)	19,862							
3. Vettaikaranpudur (P)	14,515							
4. Anamalai (P)	11,072							
5. Udumalpet (M)	28,345							
Total	128,163							

TABLE V - 12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribuion of 1,000 urban population of each zone among the six classes of cities and towns					
			I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 9 – Coonoor-Ootacamund Conurbation								
1. Ootacamund (M)	50,140							
2. Coonoor (M)	30,690							
3. Kotagiri (P)	15,509							
4. Wellington (Cantt.)	12,067							
5. Jagathala (P)	7,109	14	...	405	248	223	99	25
6. Konakkarai (P)	5,228							
7. Cordite Factory in Aravankadu (N.P)	3,126							
Total	123,869							
Zone 10 – Cuddalore Conurbation								
1. Cuddalore (M)	79,168							
2. Nellikuppam (P)	22,168							
3. Panruti (P)	18,754	134	...	659	185	156	...	...
Total	120,090							
Zone 11 – Thanjavur-Kumbakonam Conurbation								
1. Kumbakonam (M)	92,581							
2. Tiruvadamarudhur (P)	9,194							
3. Aduthurai (P)	8,587							
4. Anakudi Tirunageswaram (P)	8,254							
5. Darasuram (P)	4,165							
6. Papanasam (P)	9,705							
7. Ayyampettai (P)	9,618	32	385	320	...	39	242	14
8. Ammapettai (P)	9,258							
9. Valangiman (P)	6,910							
10. Thanjavur (M)	111,099							
11. Tiruvaiyaru (P)	11,171							
12. Vallam (P)	8,273							
Total	288,815							

TABLE V - 12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns: I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 12 – Tiruchirapalli Conurbation								
1. Lalgudi (P)	13,874							
2. Manachanallur (P)	10,050							
3. Puvalur (P)	6,135							
4. Tiruchirapalli (M)	249,862							
5. Golden Rock Railway Colony and [P]	43,120	41	677	...	230	65	17	11
6. Srirangam (M)	41,949							
7. Abishekapuram (N.P.)	3,950							
Total	368,940							
Zone 13 – Madurai Conurbation								
1. Madurai (M)	424,810							
2. Madakulam (P)	19,209							
3. Tirupparankundram [P]	18,750							
4. Avaniapuram (P)	13,151							
5. Thallakulam (P)	6,892	55	865	...	...	104	28	3
6. Ponmeni (P)	6,638							
7. Sathamangalam (P)	1,432							
Total	490,882							

TABLE V-12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	*Population of each city and town*	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns					
			I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 14 – Cumbum Valley Conurbation								
1. Bodinayakanur (M)	44,914							
2. Periyakulam (M)	36,335							
3. Cumbum (M)	32,517							
4. Gudalur (P)	24,635							
5. Allinagaram (P)	24,606							
6. Chinnamanur (P)	20,586	24	...	...	834	166	...	...
7. Uttamapalayam (P)	14,110							
8. Kombai (P)	11,317							
9. Thevaram (P)	11,180							
Total	220,200							
Zone 15 – Karaikudi Conurbation								
1. Karaikudi (M)	43,698							
2. Kottaiyur (P)	5,778							
3. Kandanur (P)	5,644							
4. Pallathur (P)	5,560							
5. Kanadukathan (P)	4,973	11	...	...	724	...	177	99
6. Puduvayal (P)	4,468							
7. Devakottai (M)	25,524							
Total	95,645							
Zone 16 – Tirunelveli Conurbation								
1. Tirunelveli (M)	87,988							
2. Palayamcottai (M)	51,002							
3. Melapalayam (M)	38,806	21	...	731	204	65	...	
4. Tachchanallur (P)	12,252							
Total	190,048							

TABLE V - 12 (Contd.)

Discernible zones of conurbation in the State, 1961

Zones of conurbation (Cities and towns arranged by District and taluks in descending order of population)	Population of each city and town	Proportion of urban population of the zone as a whole to the total urban population of the State	Distribution of 1,000 urban population of each zone among the six classes of cities and towns I	II	III	IV	V	VI
1	2	3	4	5	6	7	8	9
Zone 17 – Ambasamudram Conurbation								
1. Vikramasingapuram (P)	32,978							
2. Ambasamudram (P)	22,447							
3. Kallidaikurichi (P)	20,232							
4. Viravanallur (P)	16,554	12	...	...	675	240	85	...
5. Cheranmahadevi (P)	10,309							
6. Pattamadai (P)	9,552							
Total	112,072							
Zone 18 – Tuticorin Conurbation								
1. Tuticorin (M)	124,230							
2. Sawyerpuram (P)	8,060							
3. Eral (P)	6,446							
4. Milavittan (P)	3,126							
5. Udangudi (P)	15,267							
6. Tiruchendur (P)	15,182	25	563	...	...	315	100	22
7. Arumuganeri (P)	14,904							
8. Kayalpattinam (P)	13,432							
9. Kulasekarapattinam (P)	10,679							
10. Paramankurichi (P)	7,570							
11. Padukapathu (P)	1,643							
Total	220,539							

TABLE V - 13

The growth of zones of conurbation, 1901-61.

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961 Class of Town	1961 Population	1951 Class of Town	1951 Population	1941 Class of Town	1941 Population	1931 Class of Town	1931 Population	1921 Class of Town	1921 Population	1911 Class of Town	1911 Population	1901 Class of Town	1901 Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone– 1 Madras Metropolitan Conurbation														
1. Madras (M.C.)	I	1,729,141	I	1,416,056	I	856,453	I	713,394	I	578,550	I	555,620	I	541,167
2. Avadi (P)	IV	13,050	...	...	...	...	...	...	...	...	...	...	...	...
3. Kunrathur (P)	IV	12,244	IV	10,593	...	...	...	...	...	...	...	...	...	...
4. Poonamallee (P)	IV	11,900	III	20,677	IV	18,704	III	20,340	IV	17,549	IV	16,342	IV	15,323
5. Tiruvattiyur (M)	III	37,571	III	22,393	IV	13,909	IV	10,732	V	8,100	V	9,409	IV	15,919
6. Tambaram (P)	III	33,500	IV	18,574	...	...	...	...	...	...	...	...	...	...
7. Alandur (P)	III	22,112	IV	15,610	IV	13,213	V	9,985	...	...	...	...	...	...
8. Pallavaram (P)	IV	16,253	IV	11,941	V	9,879	IV	10,769	V	8,753	V	7,059	V	6,416
9. St. Thomas Mount-cum-Pallavaram (Cantt.)	IV	15,790	IV	15,125	V	9,317	V	9,293	IV	14,872	IV	15,604	IV	15,571
10. Villivakkam (P)	IV	15,203	IV	11,364	V	8,881	...	...	...	...	...	...	...	...
11. Ambathur (P)	IV	11,128	...	...	...	...	...	...	...	...	...	...	...	...
12. Anakaputtur (P)	V	7,460	...	...	...	...	...	...	...	...	...	...	...	...
13. Issa Pallavaram (P)	VI	4,316	...	...	...	...	...	...	...	...	...	...	...	...
14. Nekkundram (P)	VI	3,325	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone - 1 (Contd.)														
15. Erukkancheri (P)	VI	3,131	...	...	...	...	...	...	...	...	...	...	...	...
16. Palavanthangal (P)	VI	2,266	...	...	...	...	...	...	...	...	...	...	...	...
17. Koyambedu (P)	VI	2,125	...	...	...	...	...	...	...	...	...	...	...	...
18. Meenambakkam (P)	VI	1,596	...	...	...	...	...	...	...	...	...	...	...	...
19. Tirusoolam (P)	VI	1,369	...	...	...	...	...	...	...	...	...	...	...	...
20. Selaiyur (P)	VI	829	...	...	...	...	...	...	...	...	...	...	...	...
21. Eranavur (N.P.)	VI	193	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-1	21	1,944,502	9	1,542,333	7	930,356	6	774,513	5	627,824	5	604,034	5	594,396
Zone-2 Vellore-Ranipet *Conurbation*														
1. Arcot (M)	III	25,029	III	21,124	IV	16,583	IV	14,232	IV	11,450	IV	11,475	IV	10,734
2. Ranipet (M)	III	22,974	IV	18,945	IV	14,270	IV	11,583	V	8,307	V	7,807	V	7,607
3. Visharam (P)	IV	14,441	IV	13,460	IV	13,317	V	9,641	V	7,975	V	6,455	...	...
4. Walajapet (M)	IV	13,179	IV	12,601	IV	11,048	IV	11,102	IV	10,013	V	9,962	IV	10,067
5. Darapadavedu (P)	V	9,018	...	...	...	...	...	...	...	...	...	...	...	...
6. Vellore (M)	I	113,742	I	106,024	II	71,502	II	57,265	II	50,210	III	49,746	III	43,537

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-2 (Contd.)														
7. Torappadi (P)	V	6,720	...	...	...	...	...	...	...	...	...	...	...	...
8. Sathuvacheri (P)	V	6,371	...	...	...	...	...	...	...	..	...	...	...	...
9. Konavattam (P)	VI	2,648	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-2	9	214,122	5	172,154	5	126,720	5	103,823	5	87,955	5	85,445	4	71,945
Zone-3 Vaniyambadi-Ambur Conurbation														
1. Udayendram (P)	V	5,882	...	...	...	...	...	...	...	...	...	...	...	...
2. Vaniyambadi (M)	III	42,048	III	38,712	III	31,281	III	22,940	III	20,090	III	20,406	IV	12,005
3. Devasthanam (P)	VI	3,109	...	...	...	...	...	...	...	...	...	...	...	...
4. Jaffarabad (P)	VI	2,761	...	...	...	...	...	...	...	...	...	...	...	...
5. Ambur (M)	III	39,455	III	39,992	III	31,700	III	24,217	IV	19,220	IV	18,264	IV	15,903
Total Zone-3	5	93,255	2	78,704	2	62,981	2	47,157	2	39,310	2	38,670	2	27,908
Zone-4 Salem Conurbation														
1. Omalur (P)	V	7,151	V	6,480	VI	4,525	...	...	...	...	...	...	...	...
2. Salem (M)	I	249,145	I	202,335	I	129,702	I	102,179	II	52,244	II	59,153	II	70,621
3. Suramangalam (P)	IV	15,805	...	...	...	...	...	...	...	...	...	...	...	...
4. Jarikondalampatti (P)	V	8,184	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-4	4	208,285	2	208,815	2	134,227	1	102,179	1	52,244	1	59,153	1	70,621

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901 - 61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-5 Erode-Bhavani Conurbation														
1. Kumarapalayam (P)	III	24,757	V	9,892	V	6,961	...	...	...	...	...	...	...	...
2. Bhavani (P)	IV	15,860	IV	12,133	V	9,090	V	6,896	V	5,536	V	8,716	V	8,637
3. Bhavani (N.P.)	V	6,853	...	...	...	...	...	...	...	...	...	...	...	...
4. Erode (M)	II	73,762	II	57,576	III	39,483	III	33,672	III	22,911	IV	16,701	IV	15,529
5. Erode (N.P.)	III	22,766	...	...	...	...	...	...	...	...	...	...	...	...
6. Brahmana Peria Agraharam (P)	V	6,714	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-5	6	150,172	3	79,601	3	55,534	2	40,568	2	28,447	2	25,417	2	24,166
Zone-6 Tiruppur Conurbation														
1. Tiruppur (M)	II	79,773	II	52,479	III	33,099	IV	18,059	IV	10,851	V	9,429	V	6,056
2. Velampalayam (P)	V	8,396	...	...	...	...	...	...	...	...	...	...	...	...
3. Avanashi (P)	V	9,796	V	7,986	V	6,096	...	...	...	...	...	...	...	...
Total Zone-5	3	97,965	2	60,465	2	39,195	1	18,059	1	10,851	1	9,429	1	6,056
Zone-7 Coimbatore Conurbation														
1. Sulur (P)	V	9,903	V	8,464	V	6,850	...	...	...	...	...	...	...	...
2. Mettupalayam (M)	III	36,496	III	27,516	IV	17,764	IV	11,475	IV	11,118	...	...	...	...

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901 - 61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961 Class of Town	1961 Population	1951 Class of Town	1951 Population	1941 Class of Town	1941 Population	1931 Class of Town	1931 Population	1921 Class of Town	1921 Population	1911 Class of Town	1911 Population	1901 Class of Town	1901 Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-7 (Contd.)														
3. Karamadai (P)	IV	11,649	...	...	...	...	...	...	...	...	...	...	...	...
4. Coimbatore (M)	I	286,305	I	197,755	I	130,348	II	95,198	II	65,788	III	47,007	II	53,080
5. Kurichi (P)	III	28,407	III	20,579	IV	14,228	IV	12,825	V	9,703	...	...	...	...
6. Singanallur (P)	III	24,674	IV	19,852	IV	13,230	...	...	...	...	...	...	...	...
7. Uppilipalayam (P)	III	23,207	...	...	...	...	...	...	...	...	...	...	...	...
8. Peelamedu (P)	IV	18,437	IV	13,947	V	8,297	...	...	...	...	...	...	...	...
9. Kaniamuthur (P)	IV	17,327	IV	15,042	V	6,843	...	...	...	...	...	...	...	...
10. Ganapathi (P)	IV	14,176	...	...	...	...	...	...	...	...	...	...	...	...
11. Vellalur (P)	IV	13,277	IV	11,695	V	9,816	...	...	...	...	...	...	...	...
12. Madukkarai (N.P.)	IV	12,488	...	...	...	...	...	...	...	...	...	...	...	...
13. Thondamuthur (P)	V	5,400	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-7	13	501,746	8	314,850	8	207,376	3	119,498	3	86,609	1	47,007	1	53,080
Zone-8 Pollachi-Udumalpet Conurbation														
1. Pollachi (M)	II	54,369	III	41,744	III	25,198	III	22,112	IV	11,875	IV	10,909	V	8,958
2. Kottur (P)	IV	19,862	IV	14,435	IV	11,051	V	9,555	V	7,108	IV	18,801	...	...

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961 Class of Town	1961 Population	1951 Class of Town	1951 Population	1941 Class of Town	1941 Population	1931 Class of Town	1931 Population	1921 Class of Town	1921 Population	1911 Class of Town	1911 Population	1901 Class of Town	1901 Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-8 (Contd.)														
3. Vettaikaranpudur (P)	IV	14,515	IV	13,254	...	...	...	...	...	...	...	...	...	...
4. Anamalai (P)	IV	11,072	IV	10,348	...	...	...	...	...	...	...	...	...	...
5. Udumalpet (M)	III	28,345	III	23,309	IV	17,791	IV	12,184	IV	10,236	IV	10,445	IV	10,503
Total Zone-8	5	128,163	5	103,090	3	54,040	3	43,851	3	29,219	4	46,012	2	19,461
Zone-9 Coonoor-Ootacamund Conurbation														
1. Ootacamund (M)	II	50,140	III	41,370	III	29,850	III	24,616	IV	19,467	IV	18,829	IV	18,596
2. Coonoor (M)	III	30,690	III	23,902	IV	18,783	IV	14,326	IV	12,215	V	9,933	V	8,525
3. Kotagiri (P)	IV	15,509	IV	13,011	IV	10,803	V	8,017	...	...	...	...	...	...
4. Wellington (Cantt.)	IV	12,067	IV	10,714	V	8,372	V	7,289	V	6,817	V	6,018	...	...
5. Jagathala (P)	V	7,109	...	...	...	...	...	...	...	...	...	...	...	...
6. Konakkarai (P)	V	5,228	...	...	...	...	...	...	...	...	...	...	...	...
7. Cordite Factory in Aravankadu (N.P.)	VI	3,126	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-9	7	123,869	4	88,997	4	67,808	4	54,248	3	38,499	3	34,780	2	27,121

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901–61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone–10 Cuddalore Conurbation														
1. Cuddalore (M)	II	79,168	II	69,084	II	60,632	II	59,057	II	50,527	II	56,574	II	52,216
2. Nellikuppam (P)	III	22,168	III	20,695	IV	13,263	IV	13,695	IV	12,512	IV	13,504	IV	13,137
3. Panruti (P)	IV	18,754	IV	14,584	IV	16,429	IV	13,942	IV	15,293	IV	15,864	IV	15,206
Total Zone–10	3	120,090	3	104,363	3	90,324	3	86,694	3	78,332	3	85,942	3	80,559
Zone–11 Thanjavur-Kumbakonam Conurbation														
1. Kumbakonam (M)	II	92,581	II	91,643	II	67,008	II	62,317	II	60,700	II	64,647	II	59 673
2. Tiruvadamarudhur (P)	V	9,194	IV	14,240	IV	11,683	IV	12,759	IV	11,511	IV	12,549	IV	11,237
3. Aduthurai (P)	V	8,587	...	...	...	...	...	...	...	...	...	...	..	...
4. Anakudi Tirunageswaram(P)	V	8,254	...	...	...	...	...	...	...	...	...	...	...	...
5. Darasuram (P)	VI	4,165	...	...	...	...	...	...	...	...	...	...	...	...
6. Papanasam (P)	V	9,705	V	8,753	V	7,635	...	...	...	...	...	...	...	...
7. Ayyampettai (P)	V	9,618	V	9,352	V	7,546	IV	10,163	V	9,796	V	9,754	V	9,454
8. Ammapettai (P)	V	9,258	...	...	...	...	...	...	...	...	...	...	...	...
9. Valangiman (P)	V	6,910	V	6,036	V	5,770	V	5,227	...	...	...	...	...	...
10. Thanjavur (M)	I	111,099	I	100,680	II	68,702	II	66,889	II	59,913	II	60,341	II	57,870

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-11 (Contd.)														
11. Tiruvaiyaru (P)	IV	11,171	IV	11,336	V	9,302	V	7,741	V	8,494	V	8,190	V	7,821
12. Vallam (P)	V	8,273	V	8,720	V	8,076	V	8,534	V	7,647	V	7,701	V	7,590
Total Zone-11	12	288,815	8	250,760	8	185,722	7	173,630	6	158,061	6	163,182	6	153,645
Zone-12 Tiruchirapalli Conurbation														
1. Lalgudi (P)	IV	13,874	IV	12,742	V	7,314	V	9,376	IV	16,453	...	...	...	...
2. Manachanallur (P)	IV	10,050	V	7,461	V	6,560	V	6,302	V	6,058	...	...	...	...
3. Puvalur (P)	V	6,135	V	5,449	...	...	...	...	...	...	...	...	...	...
4. Tiruchirapalli (M)	I	249,862	I	218,921	I	159,566	I	142,843	I	120,422	I	123,512	I	104,721
5. Golden-Rock Railway Colony & Panchayat	III	43,120	IV	19,812	IV	16,412	IV	13,937	...	...	...	...	...	...
6. Srirangam (M)	III	41,949	III	36,702	III	26,676	III	24,663	III	23,153	III	24,799	III	23,039
7. Abishekapuram (N.P.)	VI	3,950	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-12	7	368,940	7	319,885	5	216,528	5	197,121	4	166,086	2	148,311	2	127,760

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-13 Madurai Conurbation														
1. Madurai (M)	I	424,810	I	361,781	I	239,144	I	182,018	I	138,894	I	134,130	I	105,984
2. Madakulam (P)	IV	19,209	...	...	...	...	...	...	...	...	...	...	...	...
3. Tirupparankunram (P)	IV	18,750	V	9,010	V	5,702	V	5,749	V	5,254	...	...	...	...
4. Avaniapuram (P)	IV	13,151	...	...	...	...	...	...	...	...	...	...	...	...
5. Thallakulam (P)	V	6,892	...	...	...	..	...	...	...	...	...	...	...	...
6. Ponmeni (P)	V	6,638	...	...	...	...	...	...	...	...	...	...	...	...
7. Sathamangalam (P)	VI	1,432	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-13	7	490,882	2	370,791	2	244,846	2	187,767	2	144,148	1	134,130	1	105,984
Zone-14 Cumbum Valley Conurbation														
1. Bodinayakanur (M)	III	44,914	III	35,912	III	28,435	III	27,036	III	20,341	III	20,183	III	22,209
2. Periyakulam (M)	III	36,335	III	31,000	III	25,882	III	23,004	IV	16,478	IV	18,715	IV	17,960
3. *Cumbum* (M)	III	32,517	III	26,908	III	22,177	IV	18,844	IV	16,481	...	...	...	...
4. Gudalur (P)	III	24,635	IV	19,915	IV	17,398	IV	17,612	...	...	...	...	...	...
5. Allinagaram (P)	III	24,606	IV	18,670	IV	13,123	V	9,678	...	...	...	...	...	...

TABLE V - 13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961 Class of Town	1961 Population	1951 Class of Town	1951 Population	1941 Class of Town	1941 Population	1931 Class of Town	1931 Population	1921 Class of Town	1921 Population	1911 Class of Town	1911 Population	1901 Class of Town	1901 Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-14 (Contd.)														
6. Chinnamanur (P)	III	20,586	IV	18,914	IV	14,480	IV	13,265	IV	11,812	...	...	...	...
7. Uttamapalayam (P)	IV	14,110	IV	12,506	IV	11,474	V	9,828	V	9,357	V	8,702	IV	10,009
8. Kombai (P)	IV	11,317	IV	10,641	V	9,344	V	8,519	...	...	...	...	...	...
9. Thevaram (P)	IV	11,180	IV	10,447	V	8,803	IV	13,610	...	...	...	...	...	...
Total Zone-14	9	220,200	9	184,913	9	151,116	9	141,396	5	74,469	3	47,600	3	50,178
Zone-15 Karaikudi Conurbation														
1. Karaikudi (M)	III	43,698	III	38,453	III	28,908	III	21,672	IV	15,350	IV	14,648	IV	11,801
2. Kottaiyur (P)	V	5,778	V	5,846	V	6,249	V	5,293	...	...	...	...	...	...
3. Kandanur (P)	V	5,644	V	6,000	V	6,899	V	6,732	IV	15,618	...	...	...	...
4. Pallathur (P)	V	5,560	V	5,581	V	6,315	V	6,671	...	...	...	...	...	...
5. Kanadukathan (P)	VI	4,973	...	...	...	...	...	...	...	...	...	...	...	...
6. Puduvayal (P)	VI	4,468	VI	4,294	VI	4,677	VI	4,713	...	...	...	...	...	...
7. Devakottai (M)	III	25,524	III	25,989	III	24,315	III	20,393	IV	16,143	IV	13,329	V	9,503
Total Zone-15	7	95,645	6	86.163	6	77,363	6	55,474	3	47,111	2	27,977	2	21,304
Zone-16 Tirunelveli Conurbation														
1. Tirunelveli (M)	II	87,988	II	73,476	II	60,676	II	57,078	II	53,783	III	44,805	III	40,469
2. Palayamcottai (M)	II	51,002	III	40,010	III	30,967	II	51,990	III	46,643	III	44,909	III	39,545
3. Melapalayam (M)	III	38,806	III	37,653	III	31,505	...	...	...	...	...	...	...	...
4. Tachchanallur (P)	IV	12,252	V	9,790	V	8,772	V	9,483	...	...	...	...	...	...
Total Zone-16	4	190,048	4	160,929	4	131,920	3	118,551	2	100,426	2	89,714	2	80,014

TABLE V-13 (Contd.)

The growth of zones of conurbation, 1901-61

Zone of conurbation, 1961 (Cities & Towns arranged by district and taluks in descending order of population)	1961		1951		1941		1931		1921		1911		1901	
	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population	Class of Town	Population
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Zone-17 Ambasamudram Conurbation														
1. Vikramasingapuram (P)	III	32,978	III	29,361	IV	18,832	V	8,514	...	...	...	...	...	...
2. Ambasamudram (P)	III	22,447	III	20,356	IV	17,540	IV	15,602	IV	14,118	IV	14,207	IV	12,869
3. Kallidaikurichi (P)	III	20,232	III	20,019	IV	16,031	IV	17,074	IV	16,996	IV	17,263	IV	14,913
4. Viravanallur (P)	IV	16,554	IV	17,968	IV	16,926	IV	17,682	IV	16,875	IV	15,966	IV	17,327
5. Cheranmahadevi (P)	IV	10,309	IV	10,051	V	8,958	IV	11,310	IV	11,911	IV	12,150	IV	13,474
6. Pattamadai (P)	V	9,552	V	8,798	V	8,205	V	7,283	V	6,809	V	6,290	...	...
Total Zone-17	6	112,072	6	106,553	6	86,492	6	77,465	5	66,709	5	65,876	4	58,583
Zone-18 Tuticorin Conurbation														
1. Tuticorin (M)	I	124,230	II	98,866	II	75,614	II	60,395	III	44,522	III	40,185	III	28,048
2. Sawyerpuram (P)	V	8,060	V	7,631	...	...	...	...	...	...	...	...	...	...
3. Eral (P)	V	6,446	V	5,479	V	5,293	V	5,044	V	5,012	...	...	...	...
4. Milavittan (P)	VI	3,126	...	...	...	...	...	...	...	...	...	...	...	...
5. Udangudi (P)	IV	15,267	IV	13,485	IV	13,184	IV	12,397	V	7,624	...	...	...	...
6. Tiruchendur (P)	IV	15,182	IV	13,214	IV	11,110	IV	15,328	V	8,883	III	25,531	III	26,056
7. Arumuganeri (P)	IV	14,904	IV	13,801	...	...	...	...	...	...	...	...	...	...
8. Kayalpattinam (P)	IV	13,432	IV	11,302	V	9,931	V	8,756	IV	13,105	IV	12,862	IV	11,746
9. Kulasekarapattinam (P)	IV	10,679	IV	10,029	IV	11,900	IV	11,114	IV	12,691	III	21,812	IV	19,898
10. Paramankurichi (P)	V	7,570	...	...	...	...	...	...	...	...	...	...	...	...
11. Padukapathu (P)	VI	1,653	...	...	...	...	...	...	...	...	...	...	...	...
Total Zone-18	11	220,539	8	173,807	6	127,032	6	113,034	6	91,837	4	100,390	4	85,748

Cities

21. I have indicated in my discussion on conurbation the factors governing the growth of urban areas in different parts of the State. I now propose to make a more detailed study about the growth of cities in Madras State. Madras City has a population of more than 17 lakhs. Its growth is also a subject of separate study in my volumes on Greater Madras. The other cities selected for study are Madurai, an historical city which has grown recently; Tiruchirapalli a city located in the Cauvery delta; Salem, a primitive city in which a large concentration of population has taken place without any corresponding industrialisation or development in trade and commerce; Coimbatore, an industrial city which has recorded the most remarkable development in the last thirty years and so on. The maps for the cities have been presented separately showing the salient features, different blocks of centres. It is for us to examine how the structure of the city favours or retards the predominant characteristics. It is also interesting to study whether its development had been hindered or aided by the existence of towns which can be legitimately grouped in a town-group. Special features in its location will also be discussed.

Madras City

A sketch map of Madras City is given separately. It has an interesting history. It has grown from an obscure hamlet to a great metropolis. It may appear a far cry, but that is how the growth of the city could be epitomised. None could have thought that the small village of Madraspatnam with its adjoining bare sandy shore without any natural advantages would grow into a great city. In 1871, Madras was returned as the 5th city of the British Empire. It is rather surprising that this position was attained by Madras in the course of 231 years inspite of the fact that it did not have even a port in the true sense of the term. The facilities available in the port were a jetty and a roadstead from which most passengers and goods were landed by risky surf-boats nor was there any significant industrial advancement. The original Madras was the headquarters of the British factories in India. But with the battle of Plassey, Calcutta became the centre and Madras lost its political importance which it had.

The growth of the city in status and stature is inextricably linked with the expansion of British commercial enterprise. In fact Madras like other cities which developed exclusively under the British rule exhibited an admirable blend of Indian and European traditions establishing a modified type of European town-ship in which Indo-British culture evolved and still continues to flourish.

It will be interesting to study the factors which have either promoted or retarded the growth of the city on the Coromandel Coast. The 20th of February, 1640 is a red letter day in the history of the British in India when the first establishment of the English at this seaside village took place. The choice of Madras by the British traders was fortutious rather than planned. It was based more on political and commercial considerations rather than on any perceptible geographical advantages. They selected the site of Madras after a process of trial and error. They experimented with Masulipatam and Armagaon, a place 35 miles north of Pulicat, both in Andhra Pradesh. With Masulipatam not prosperous and Armagaon completely hopeless, the enterprising English traders were on the look out for a new site which would be more favourable.

During those days, the coastal area from Pulicat to the Portuguese settlement of San Thome, now included in the city, was ruled by one Venkatapathy Nayak with his headquarters at Wandiwash. The work of administering the affairs of the coast was entrusted to his brother Ayyappa Nayak who was residing at Poonamallee, a few miles to the west of Madras. Ayyappa Nayak invited Francis Day, the chief of the Armagaon Factory to choose a site within his jurisdiction. Two factors influenced Day in the choice of the site of Madras. The first was the capacity of the Cooum creek to take ships upto 50 tons load. Secondly, the shallow lagoon parallel to the coast about a mile inland was considered very useful. These advantages were of course not exclusively possessed by the site. The East India Company could later in the 17th century find half a dozen places with these advantages though some places like Porto Novo were already taken by the Portuguese or Dutch. The real decisive factor in choosing this site was the production of calicos at Madraspatnam

village which was the place offered by the Nayak for the site of the proposed factory. The calicos woven there were very attractive and much cheaper. From time immemorial an important and efficient hand weaving industry with its allied trade of spinning, dyeing and printing was thriving in this small village.

Thus it is an immemorable fact that the East India Company occupied Madras not by conquest but by invitation. This has influenced the history and evolution of Madras which were conspicuously distinct from the rest of India.

The Englishmen first occupied the whole area bounded by the traditional village limits of Madraspatnam. The nucleus area spread along the coast from a point a few hundred yards north of the Cooum river upto a place little away from the northern end of the present George Town. In the hinterland, the area covered the island ground on the west and its western line ran along the Buckingham canal, then known as the north river right upto the north-western corner of the present George Town. The villages in and around the area were slowly acquired in the traditional British fashion.

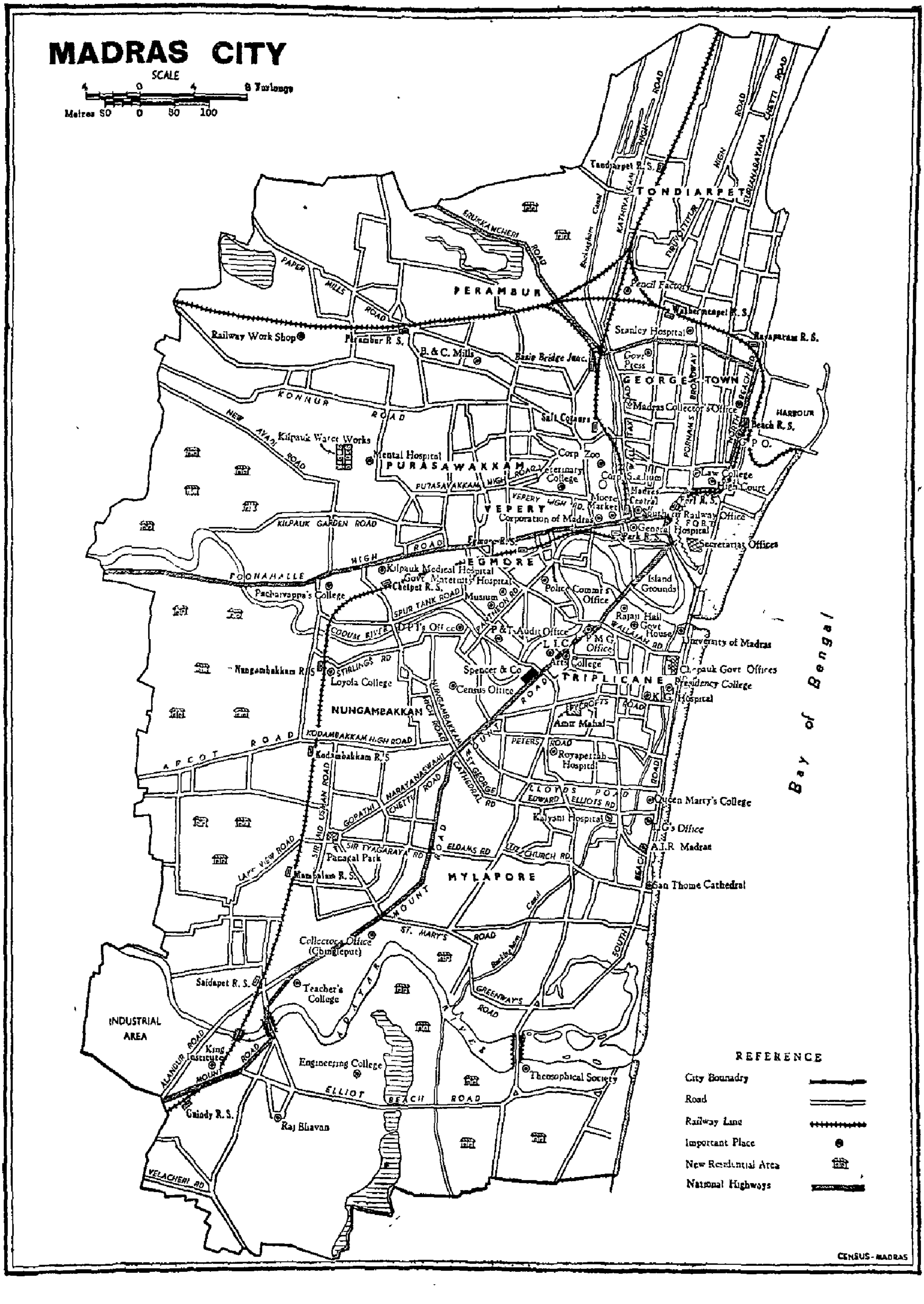
A major factor which has influenced the formation and expansion of the city is the equable nature of its climate. Situated on the east coast of the country in latitude 13°4′ N, longitude 80°15′ E, Madras possesses the tropical maritime monsoon type of climate. In fact this has been described as one of the pleasant dwelling places in the East. The mean temperature for the coolest months (December and January) is about 76°F and for the hottest months (May and June) about 90°F. The mean annual rainfall is 50 inches and the average number of rainy days (i. e. days with 10 cents or more of rain) is 57. One of the chief climatic features of Madras is the cool sea breeze during April to October which provides some welcome relief in an otherwise uniformly warm and moist climate. These conditions were to a great extent conducive to the growth of the city.

Though Madras had no geographical or natural advantages which could accelerate its growth, except perhaps the sea shore which promoted trade and commerce, there were also features which retarded its progress to any great extent. Though situated on the sea shore, Madras did not possess a natural harbour. Sir Francis Spring, the architect of the man made harbour described it as a 'challenge flaunted in the face of nature'. The Englishmen had to face for a long time the serious handicap arising out of the absence of any natural harbour at a port where the surf was continual. Nor did Madras possess any rich potentialities for rapid industrial growth. But the fact remains that ever since the English occupied the site of Madraspatnam, it began to occupy a key position in the commercial map of the world. It was more a commercial centre than an industrial one—a city of shop keepers. The strategic location of Madras also accounts for its importance and growth as a commercial centre. Mr. O. H. K. Spate has observed as follows in his book entitled "India and Pakistan."

"Strictly speaking its site has no advantages whatever except that its position midway between Pennar and Ponnaiyar probably counts for something. But in the general setting of early English activity along this coast, some commercial and administrative centre was bound to develop and any site once developed was bound to maintain its position since if it had no special values itself, no possible rival had any either and a growing concern had a certain preemption. But it is obviously and solely a matter of history that Madras is today more important than Pondicherry."

The first thing which the Englishmen did was to establish a fort. Soon after its completion there collected around it a population of Indian traders, weavers, painters, dyers—a motley crowd attracted by the prospect of trade Within a year after the English had settled, there sprung about 80 well built houses on the northern and southern sides of the fort, while in the village of Madraspatnam to the north, nearly 400 families of weavers came to settle permanently. The fame of Madras soon spread far and wide and within a year and six months of its foundation, it became the chief headquarters of the company on the Coromandel Coast. Towards the end of the 17th century, Madras was the chief British settlement in India and the principal port of European and native goods.

During its earlier days, the fort could not exert any influence except in the Black Town, the present George Town area. But in course of time


MADRAS CITY
SCALE
4 0 4 8 Furlongs
Metres 50 0 50 100
TONDIARPET
Tondiarpet R.S.
PERAMBUR
Perambur R.S.
Railway Work Shop
B. & C. Mills
Basin Bridge Junc.
Pencil Factory
Washermenpet R.S.
Stanley Hospital
Royapuram R.S.
Govt. Press
GEORGE TOWN
Madras Collector's Office
HARBOUR
Beach R.S.
P.O.
Salt Cotaurs
KONNUR ROAD
NEW AVADI ROAD
PAPER MILLS ROAD
ERUKKANCHERI ROAD
Kilpauk Water Works
Mental Hospital
PURASAWAKKAM
PURASAWAKKAM HIGH ROAD
Corp. Zoo
Veterinary College
Corp. Stadium
Law College
High Court
VEPERY
VEPERY HIGH RD.
Moore Market
Madras Central
Corporation of Madras
Southern Railway Office
FORT
General Hospital
Park R.S.
Secretariat Offices
KILPAUK GARDEN ROAD
POONAMALLEE HIGH ROAD
Egmore R.S.
EGMORE
Kilpauk Medical Hospital
Govt. Maternity Hospital
Chetpet R.S.
Pachaiyappa's College
SPUR TANK ROAD
Museum
PANTHEON RD
Police Commr's Office
Island Grounds
Rajaji Hall
Govt. House
COOUM RIVER
D.P.I's Office
P & T Audit Office
L.I.C.
P.M.G. Office
WALLAJAH RD
University of Madras
Nungambakkam R.S.
STERLING RD
Loyola College
Spencer & Co.
Arts College
Chepauk Govt. Offices
Census Office
TRIPLICANE
Presidency College
K.G. Hospital
NUNGAMBAKKAM
NUNGAMBAKKAM HIGH ROAD
Amir Mahal
ARCOT ROAD
KODAMBAKKAM HIGH ROAD
Kodambakkam R.S.
PETERS ROAD
Royapettah Hospital
CATHEDRAL RD
LLOYDS ROAD
EDWARD ELLIOTS RD
Queen Marry's College
Kalyani Hospital
A.G.'s Office
SIR THIYAGARAYA RD
ELDAMS RD
CHURCH RD.
A.I.R. Madras
LAKE VIEW ROAD
Panagal Park
Mambalam R.S.
MYLAPORE
San Thome Cathedral
MOUNT ROAD
ST. MARY'S ROAD
Collectors Office (Chingleput)
Saidapet R.S.
Teacher's College
ADAYAR RIVER
GREENWAY'S ROAD
SOUTH BEACH ROAD
INDUSTRIAL AREA
ALANDUR ROAD
King Institute
Engineering College
Theosophical Society
ELLIOT BEACH ROAD
Guindy R.S.
Raj Bhavan
VELACHERI RD
Bay of Bengal
REFERENCE
City Boundary
Road
Railway Line
Important Place
New Residential Area
National Highways
CENSUS - MADRAS

the fort became a nucleus of a fast developing metropolis. Within a radius of five miles a number of villages existed which were brought under the authority of the Company in stages. Triplicane was acquired in 1668, Tondiarpet, Purasawalkam and Egmore were added in 1693, Vyasarpadi, Nungambakkam, Tiruvattiyur and Ennore in 1708, Vepery, Perambur and Pudupakkam in 1742. Meanwhile San Thome and Mylapore and other areas also had come under its control. Thus the lives of the inhabitants of the villages were increasingly linked with the activities of the fort and the conglomeration of the villages began to expand until it became a sprawling city. The growth of Madras was, however, not similar as that of Bombay or Calcutta. The availability of extensive and undeveloped villages around Madras enabled a lateral extension horizontally whereas in other cities a vertical expansion has taken place. Till recently Madras was a one-storied city and despite the difficulties created by way of transport problems, it has not been affected by the sky-scaling tendencies of Bombay.

The original village of Madraspatnam was distinguished from the new town developing around the fort in its earlier days. It was situated to the north of the site of the fort and the new town which grew up around the fort was commonly known to the Indians as Chennapatnam. The space lying between the southern Chennapatnam and the northern Madraspatnam was found and was soon occupied by the people, so that the two villages became one big town. The site of the fort was referred to as Madras and the Indian town to the north was known as Chennapatnam.

For a number of years during the 17th century, chaos and confusion prevailed in the neighbouring area on account of the revolt of Mir Jumla against his Golconda Chief. Madras was frequently threatened by the exactions of the local chief who ruled over the Poonamallee region on behalf of the Muhamadans. On one occasion, the Muslim troops entered the settlement and burnt some houses. One of the greatest events which affected the growth of the city was the capture of Madras in 1746 by the French. They occupied the city for three years. The French left some indelible marks on the city. They undid many of the constructive items of work done by the English administration. Many buildings and edifices were razed to the ground. On the whole, the French caused great damage in a ruthless manner. After the English regained possession, the work of remodelling and reconstructing the fort was undertaken. The river on its west side was diverted to its present course and its old bed was built up and included in the fort.

The city has seen many vicissitudes during its growth. The growth in area has been very gradual and limited. It was 29 square miles in 1891. It is today 49 square miles. The population from 1871 onwards has been as follows:

Year	Population	Decennial variation	Percentage variation
1871	397,552	...	...
1881	405,848	8,296	2.1
1891	452,518	46,670	11.5
1901	509,346	56,828	12.6
1911	518,660	9,314	1.8
1921	526,911	8,251	1.6
1931	647,230	120,319	22.8
1941	777,481	130,251	20.1
1951	1,416,056	638,575	82.1
1961	1,729,141	313,085	22.1

Of late the city has made some progress in the field of industry. This has in a way resulted in congestion and formation of slums. People have also shown a tendency to settle in the city margins. The electrification of a portion of the South Indian Railway has encouraged the development of suburban areas in the south. The growth of the residential suburbs outside the city has been further stimulated during the past three or four decades by the rapid development of bus transport in the city. Thus the concept of 'Greater Madras' has been evolved which will cover the population in the areas on the outskirts of the city, outside the Madras Corporation limits, satellite towns and industrial areas or settlements close to the city which are even interspersed with rural areas. The inclusion will be based on facilities for urban growth, transport arrangements and interchange of population on account of business and work. By this standard, the areas bounded on the south by Tambaram, west by Avadi and north by Ennore should

normally form the boundaries of Greater Madras with a population of 22 lakhs, but the present population of the city bounded by Corporation limits is 17.29 lakhs.

The expansion of the city had also been facilitated in that it was the headquarters of one of three Presidencies in India. It had till 1953 a large area extending over the southern parts under its administrative control. This coupled with the fact that the University of Madras and higher educational institutions were located in Madras have attracted a large number of persons from all over the South to the city. The location of the Buckingham canal also facilitated the growth of coastal trade with Andhra districts. This administrative importance has, to some extent added to its development and after the formation of the Linguistic Provinces, a tendency is noticed for the administrative importance to go down. Again with the growth of the regional language, Madras as a cultural centre of the South has ceased to be attractive to the outsiders while dispersal of facilities for higher education like medicine and engineering has also resulted in the loss of importance of the city.

The population of the city has risen from 4 lakhs in 1871 to 17.3 lakhs in 1961. This increase is to a large extent due to the migration from the rural areas of the State. During 1941-51, the city limits were extended from 30 square miles to 49 square miles. About 28 villages to the south and west in Chingleput district and Saidapet municipality were added to the Corporation of Madras. But in a number of localities in this newly acquired area, there is no adequate provision for water and drainage facilities, not to speak of good roads, street lighting and other amenities. The Madras city does not have an adequate water and power supply which has also affected the industrial development of the city. Another important factor which has hampered the development of the city is the absence of adequate communication facilities with the outlying parts, especially to the north and west. Further a tendency has been noticed to shift the industrial units from the city to other parts of the State.

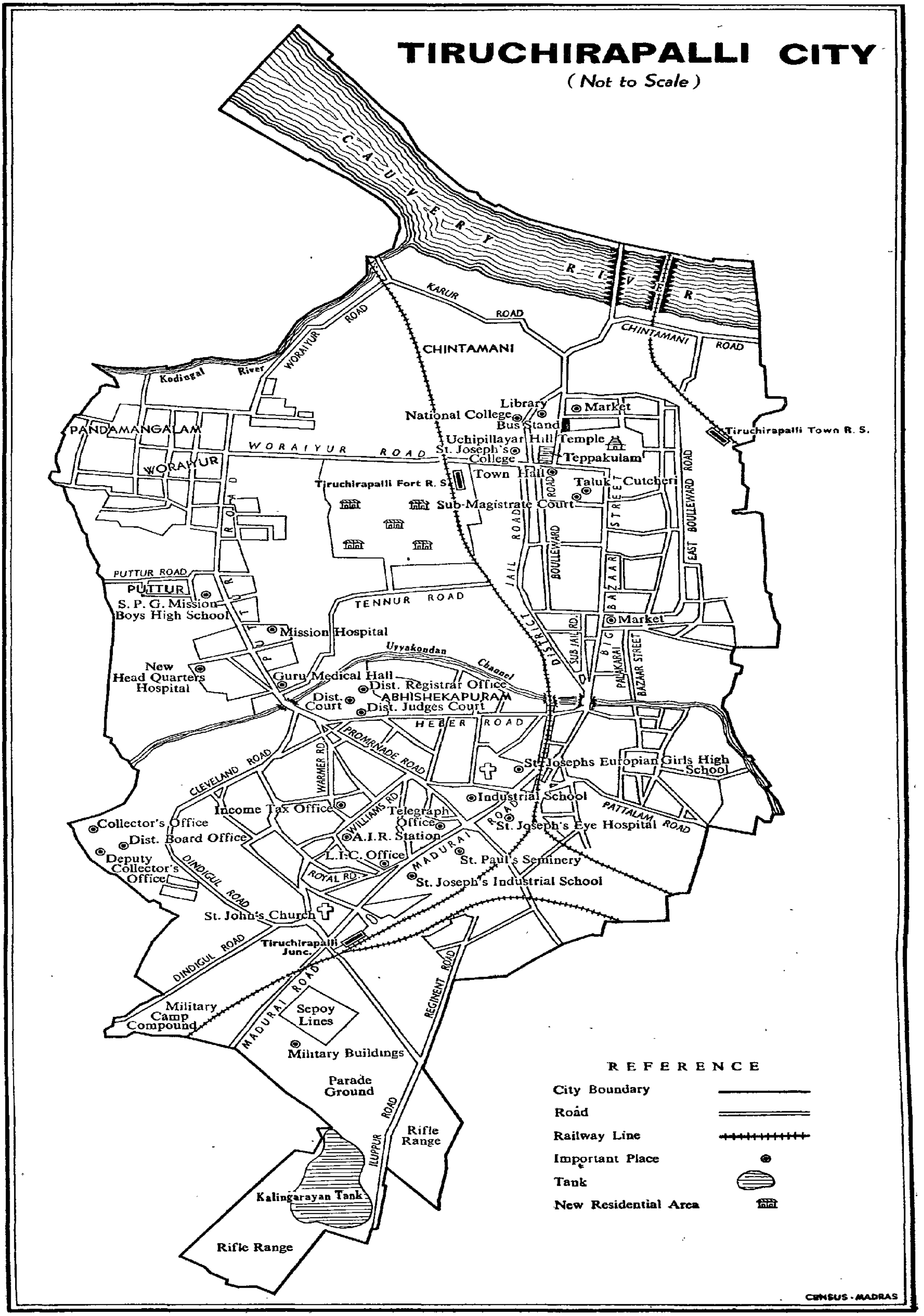
City of Tiruchirapalli

Tiruchirapalli situated in latitude 10° 50′ N and longitude 78° 40′ E, is a city of historical importance. It stands on a sandy plain about half a mile from the southern bank of Cauvery. A few miles above Tiruchirapalli (or Tiruchi), the river bifurcates into two branches called the Coleroon and Cauvery, the former being the larger of the two. Srirangam lies just north of Tiruchirapalli, as an island between Cauvery and Coleroon. Tiruchirapalli commands an important position on the Cauvery which has made Thanjavur the granary of Madras State. Tiruchirapalli is a major railway junction in the south and is located on the Southern Trunk Road. It is the link between south and north. It was the headquarters of the South Indian Railway. Consequently it has become a big city rapidly. On the northern side of Cauvery stands Srirangam which is famous for the temple held sacred by the Hindus in general and the Vaishnavites in particular. The two places are connected by rail and road bridges. A new bridge constructed recently a mile east of the original bridge has improved the communications with the north. But the fact that Cauvery cuts off Tiruchirapalli from places north of the river has retarded its progress.

Tiruchirapalli which has been a Class I city ever since 1901 has a population of 249,862 at present, its population in 1901 being 104,721. Woraiyur also known as Kozhiyur which is now a part of the city was once the capital of Chola kings and a popular place of the Sangam age. The city is thus steeped in rich traditional culture. This apart, the Fort which is the nucleus around which the city has expanded was a scene of many a warfare. The city is also a famous seat of learning in South India.

We may now analyse the salient features of the growth of the city in the past and the present. The shape of the city does not present any symmetric form. This is due to addition of areas in different directions to the original Tiruchirapalli town which may be taken to be synonymous with the Fort area and the Cantonment. With the efflux of time, the following areas were added to the original town :

1. Woraiyur
2. Thennur
3. Puthur
4. Palakarai
5. Tharanallur


TIRUCHIRAPALLI CITY
(Not to Scale)
CAUVERY RIVER
KARUR ROAD
CHINTAMANI ROAD
CHINTAMANI
WORAIYUR ROAD
Kodingal River
PANDAMANGALAM
WORAIYUR
Library
National College
Market
Bus Stand
Uchipillayar Hill Temple
St. Joseph's College
Teppakulam
Town Hall
Tiruchirapalli Fort R. S.
Taluk Cutcheri
Sub-Magistrate Court
Tiruchirapalli Town R. S.
EAST BOULLEVARD ROAD
BOULLEVARD
BIG BAZAAR STREET
JAIL ROAD
SUB JAIL RD.
DISTRICT
PUTTUR ROAD
PUTTUR
S. P. G. Mission Boys High School
TENNUR ROAD
Mission Hospital
Uyyakondan Channel
New Head Quarters Hospital
Guru Medical Hall
Dist. Registrar Office
ABHISHEKAPURAM
Dist. Court
Dist. Judges Court
PALAKARAI
BAZAAR STREET
HEBER ROAD
PROMENADE ROAD
CLEVELAND ROAD
WARMER RD.
St. Josephs Europian Girls High School
Industrial School
PATTALAM ROAD
Income Tax Office
WILLIAMS RD.
Telegraph Office
A.I.R. Station
St. Joseph's Eye Hospital
Collector's Office
Dist. Board Office
Deputy Collector's Office
DINDIGUL ROAD
L.I.C. Office
MADURAI ROAD
St. Paul's Seminery
ROYAL RD.
St. Joseph's Industrial School
St. John's Church
Tiruchirapalli Junc.
REGIMENT ROAD
Military Camp Compound
Sepoy Lines
Military Buildings
Parade Ground
ILLUPPUR ROAD
Rifle Range
Kalingarayan Tank
Rifle Range
REFERENCE
City Boundary
Road
Railway Line
Important Place
Tank
New Residential Area
CENSUS - MADRAS

6. Irudayapuram
7. Varaganeri
8. Chintamani
9. Bhimanagar
10. Devadanam
11. Pandamangalam

Each of these areas has its own individuality and tradition and consequently the present city which is a conglomeration of these areas presents a complex pattern.

Tiruchirapalli represents a typical urban centre containing a congested old section with adjoining sections which have been better planned. The streets are generally narrow and crooked. The main vehicular thoroughfares are hardly thirty or forty feet in width, mostly without side walks and encroached upon by booths and the projecting open fronts of the shops which are situated on either side. From the top of the Rock Fort one can have a complete view of the cityand a discerning observer will not fail to notice besides the panoramic setting of the city on the banks of Cauvery, the towers and minarets of churches and mosques and pinnacles of temples, the haphazard formation of structures and roads and the heavy congestion in the heart of the city.

The main bazaars are crowded with a number of retail shops which deal in grains, cloth, hardware, jewellery and other consumers' goods. There is a bazaar for grain merchants near Gandhi market and Big Bazaar contains goldsmiths, silversmiths and artisans dealing with artificial diamonds. The wholesale markets for grain and other commodities are also found nearby.

The Uyyakondan channel, a branch of the Cauvery flows in the middle bifurcating the town and the cantonment. The cantonment lies on the south and south-west of the town. This fine channel cuts through a great part of the cantonment and has three bridges. Tiruchirapalli was declared a municipality in 1866 and a number of schemes for providing all civic amenities to the citizens were drawn up. The first item was supply of water to the town. The South Indian Railway and the municipality jointly came forward to ensure supply of adequate water to the Railways as well as the people by establishing a pumping station on the Cauvery bed and an overhead tank at the Fort. Thus started the development of the city on modern lines.

The city is cut into many sections by railway lines and roads. The Railway lines running east-west through the Tiruchirapalli junction and the broad gauge line running northwards from the junction trifurcate the city into three zones, each of them having a distinct feature of its own. The constituents of three zones and their characteristics may now be studied.

First Zone

The area on the eastern side of the broad gauge railway line may be called the first zone. The southern part of this area is Palakarai which is a residential-*cum*-commercial centre. The northern section of this zone is known as Chintamani and is close to the river. In the north-east corner of this zone, the Tiruchi Town railway station is situated on the metre gauge line from Golden Rock. The central part of this zone is the original Trichy town with the Fort. Within the Fort area is a huge rock about 273 feet high which was once a citadel, but is now occupied by dwelling houses. There is a famous temple dedicated to Lord Ganesa at the top of the rock and a Siva temple at a height of 150 feet. The Fort area was an important battle field during the Franco-English wars. At present this area with a tank in the middle is a beehive of commercial activity. The area is very congested with old fashioned houses and narrow streets and alleys. Some of the leading colleges like the St. Joseph's College and schools are situated in this area.

Second Zone

The area on the southern side of the railway line running east-west through the junction forms the second zone. This is the old cantonment area with broad roads, vast expanse of lands and huge buildings. As in the British days, most of the lands and buildings are utilised for military purposes. There is an excellent drive round the old race course ground and brigade exercise ground from which even the rock in the Fort can be viewed.

Third Zone

The area on the western side of the broad gauge line flanked on the southern side by the

metre gauge line may be called the third zone. The northern part of this zone contains Woraiyur, Tiruttandoni, Pandamangalam, Puthur and other places which were added to the city in stages. The area adjacent to the Fort Railway Station and bordered in the north by Woraiyur road is fast developing into a residential area with modern type of bungalows. Thillainagar is one such colony which has sprung up recently. The south-western portion of this zone is a part of the cantonment area. A notable feature is that this zone has the majority of public buildings, churches, Government offices like the Collector's Office, schools and other educational institutions, District Court etc.

I may now summarise the evolution of Tiruchirapalli into the present stature in terms of this zonal classification. The third zone was combined with the first and second zones to form the city as it exists today. The city is elongated from north to south. The northern end of the city, the border of which is almost parallel to the river is flat and the city becomes wider and wider down south and almost ends in a sharp point ultimately at the southern end.

An analysis of the dispersal of communities in the city may perhaps be revealing. The important communities of the city and the localities where they are predominant are given below :

Community/Caste	*Predominant locality*
Brahmins	1. Fort area, especially North Street and Andar Street
	2. Thennur
	3. Puthur
	4. Pandamangalam
	5. Varaganeri in Palakarai
	6. Mela Chintamani
	7. Thillainagar
Achari/Kammalan	1. Big Bazaar
	2. Big Kammala Street
	3. Chinna Kammala Street
	4. Varaganeri
	5. Woraiyur
Devanga	1. Woraiyur
	2. Pandamangalam
	3. Tiruttandoni
Saurashtra	1. Big Bazaar
	2. Saurashtra Street
	3. Woraiyur
Thevar	1. Woraiyur
	2. Puthur
	3. Thennur
Christians	1. Cantonment
	2. Palakarai especially Eda Street
	3. Thennur
	4. St. Mary's Thope
Muslims	1. Singarathope
	2. Chauk area
	3. Around Gandhi market
	4. Palakarai
	5. Thennur
	6. Woraiyur
	7. Madura Road
Scheduled Castes	On the eastern side of Town Railway Station

Each of these communities has played an important role in the life of the city. The Brahmins are mostly employed in Railway and other Government Offices. They were originally predominant in the area around the temple, viz. the Fort area. Some of them have now moved to the new localities like Thillainagar. The jobs in the Railways have attracted the Brahmins who took full advantage of English education, from the adjoining district of Thanjavur and other parts of Tiruchirapalli district itself. Mostly they own lands in their native places and the Railway job supplement their income. People of this community in general preferred service to industrial enterprise. The South Madras Electric Supply Corporation Ltd. established by Seshasayee Brothers is, however, a pioneer in the field of supply of electricity in Tiruchirapalli and Srirangam areas. The Acharis or Kammalans of Tiruchirapalli are noted for their dexterity in the lapidary work connected with synthetic gems. The Saurashtras and Devangas produce beautiful sarees. The Thevars manufacture the famous Tiruchi cigars. Muslims are engaged mainly in tanneries and business. Christians are mostly employed in Railways and educational institutions. Christianity had taken deep roots in the city and it is interesting to note that some Brahmin converts live as separate groups with names such

Vincent Narayana Iyer, Joseph Vaidyanathan etc. in the St. Mary's Thope area.

By virtue of its strategic location, the city plays a vital role. It has direct connection with almost all the cities in the South. The Tiruchirapalli Junction holds a pride of place in the history of Railways. This is a Railway Divisional Headquarters and the adjoining Golden Rock is has major Railway Workshop. Woraiyur which is a part of Tiruchirapalli is famous for saree weaving and its cigars have won the admiration of even foreigners.

With the Uchipillayar temple in the heart of the city and the temple of Lord Ranganatha in the neighbouring town of Srirangam and the famous Siva temple in the nearby Tiruvanaikkaval, the place attracts a good number of pilgrims and tourists.

The city is served by Town buses. There are four Railway stations within the city, viz., Junction, Town, Fort and Palakarai. Rail transport is thus available within the city. It is proposed to locate the Boiler Plant (Centrally sponsored scheme) near Tiruchirapalli. Around Tiruchirapalli, sugar and cement factories have been established. But Tiruchirapalli has not witnessed any marked industrial development in the recent decade nor is it likely to witness, the main reason being the lack of local enterprise.

City of Madurai

Madurai, the second biggest city in the State is situated close to the banks of the Vaigai river at latitude 9° 55'N and longitude 78° 8'E. The city lies about 500 kilometres south of Madras and is easily accessible by road, rail and air. Madurai is at an altitude of 99.99 metres above sea level and has an area of 8.56 square miles. The city is not unhealthy and it enjoys a somewhat even climate, as the mean maximum temperature is 40° C. in summer and 32° C. in winter.

On account of the classical beauty of the architecture of its temples, the city has been frequently referred to as the "Athens of South India" by European scholars. This city with a glorious past has been the focal centre of Dravidian culture and civilization. The city was for many centuries the political and religious capital of the southern-most portion of India. Greek and Roman historians wrote about Madurai as the seat of Pandyan kingdom two or three centuries before the Christian era and Ptolemy in or about A. D. 80 speaks of the "Meditreranean emporium of Modoura" of the Pandyan king. These and other references point clearly to the great antiquity as well as to the commercial wealth of Madurai and today it is a prosperous place of business containing a population of 424,810. Apart from its distinction as the cradle of civilization, it commands its parent importance even today in the fields of industry, trade, art and literature.

The old Madurai was built by Kulasekhara in the 6th century B. C. It was during the regime of the Nayaks in the 16th and 17th centuries that the modern city of Madurai was planned. The lay-out of its main streets was determined according to the laws of the Silpa Sastra. Notwithstanding the many invasions and ravages including that of the Moghuls during its chequered history, this city has been maintaining its links with the past and this is one of the main reasons for its everlasting importance.

The Meenakshi temple which has carried the name of Madurai not only all over India, but across the continent, was the nucleus of the original Madurai town. The concentric streets on the four sides of the temple called Adi Vithi, Chithrai Vithi, Avani Moola Vithi, Masi Vithi and Veli Vithi with the temple at the centre constituted the old town. As days passed by, the city started expanding on all sides. Madurai became a municipality on 1st November, 1806. Next to Madras Corporation, Madurai municipality is the most important in this State on account of its population and resources. The municipality has provided among other civic amenities, street lights, piped water supply and underground drainage. In area, Madurai occupies the fifth place among the cities of the State, the first four being Madras, Thanjavur, Tiruchirapalli and Coimbatore. In respect of density of population (49,627 per sq. mile), however, Madurai stands first in the whole State among Class I cities. With regard to number of occupied residential houses, Madurai with 50,243 houses comes second, the first place being occupied by Madras. In the matter of population also, this city is next only to Madras. All these factors throw light on the

acute congestion prevailing in the city. Majority of the people are either mill workers, artisans or businessmen and all these persons reside in and around their workspots in the city and this has resulted in this congestion.

For a clear understanding of the city and its environs, we may have to study in detail its different localities after dividing it into the following three zones.

First Zone

This zone to the east of Madurai railway station is bounded on the north by Vaigai river, on the west by the Madras-Madurai railway line, on the south by the Madurai-Rameswaram railway line and on the east by the city boundary. The western half of this zone is the original Madurai town with the temple at the centre. This is the centre of its commercial activity. This part of the zone is heavily congested with residential and business houses. The important wholesale and retail markets are located here. Adjacent to the railway station is the Central Bus Stand which is one of the major and well planned bus stands in the South. This part is consequently over-crowded with people coming from far and near by rail and road. The T.V.S. & Sons are pioneers in the field of organising road transport in the city. They have located their workshops on the South Veli street.

This zone contains the principal feature of interest of Madurai, viz., the great temple which is situated at a distance of one mile from the station. The temple building or rather a chain of buildings is divided into two parts, the northern portion being dedicated to Siva or Sundareswara as the deity is called and the southern to his consort, Meenakshi. The temple is one of the biggest temples in India containing exquisite and famous sculptural work. One of the principal structures in this great temple is the Hall of Thousand Pillars in which groups of figures depicting mythological events are carved from single stones. These reveal the marvels of industry and advancement of civilization in ages past. Besides, there are 'Musical Pillars' of stone which emit different notes when played upon. These attract thousands of pilgrims and tourists every day. A noteworthy feature is that many people desire to live very near to the temple resulting in high density of population in the area. The historic palace of Tirumala Nayak (now housing some courts and offices) is another place of attraction for the tourists. American Mission Hospital is also situated on the western half of this zone.

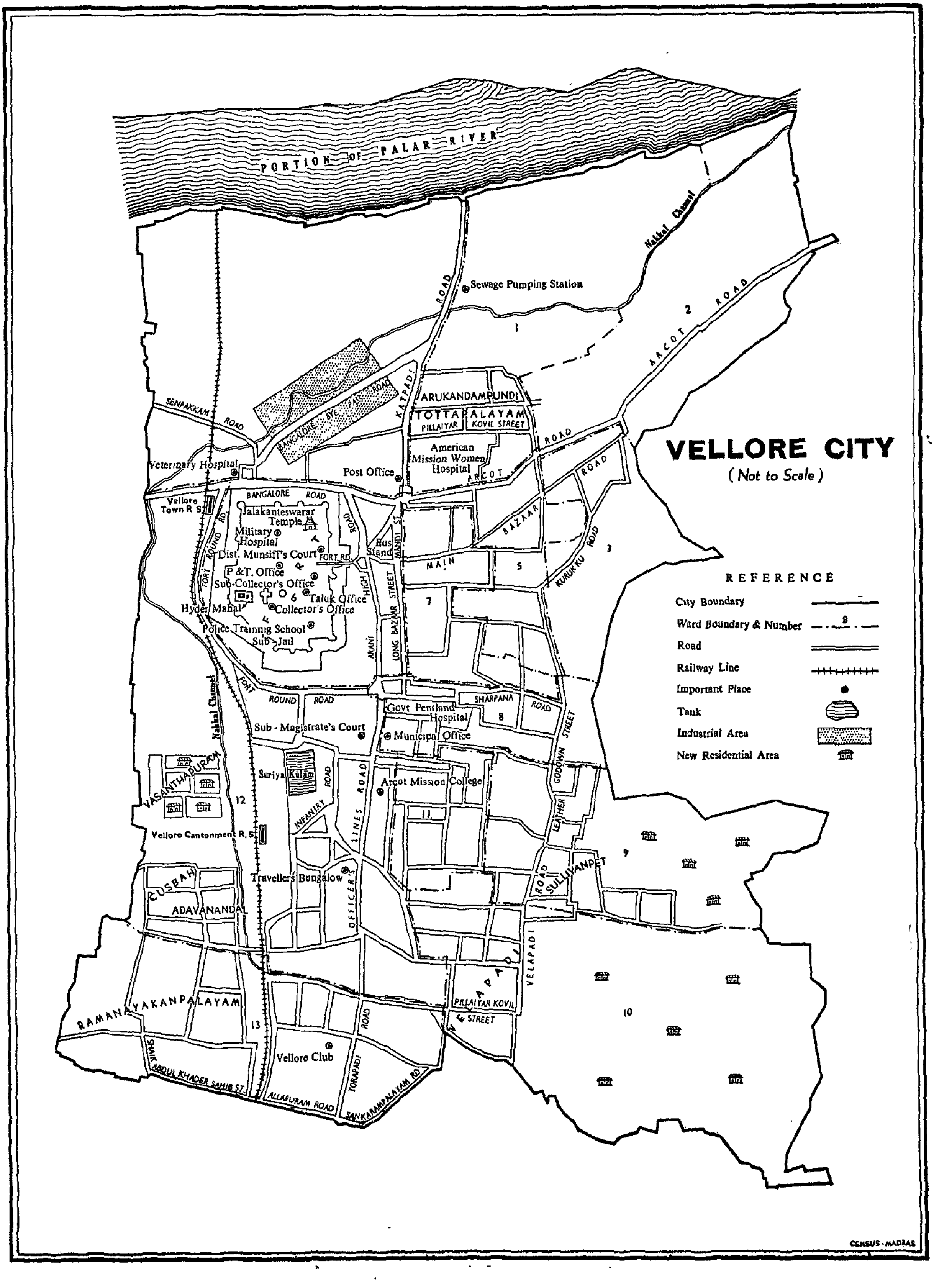
The eastern half of this zone is less congested. There are, however, a number of textile mills in this area. On either side of Ramnad Road, well planned houses are found. On the eastern end is an artificial reservoir called the Teppakulam or tank of the raft which owes its construction to Tirumala Nayak. It is 1,000 feet in length and 950 feet in width and in the centre is a square island among whose picturesque foliage is a lofty pagoda having beautiful little shrines at each of the four corners. The floating festival which is celebrated every year in the months of January and February when the god and goddess are floated on a raft in the Teppakulam attracts a big crowd.

Second Zone

This zone is that part of the city which is on the northern side of the river Vaigai. A bridge was constructed in 1889 over the river connecting the northern and southern parts. The Alagarkoil Road bifurcates this zone almost vertically. Majority of Government offices including the Collectorates of Madurai and Ramanathapuram are situated in this zone. Chokkikulam, Thallakulam and other areas comprised in this zone came to be occupied only during the last 40 years and this zone which is relatively of recent origin is not so congested as the first zone. Many new residential areas like Shenoy Nagar, Chokkikulam Extension etc. have come up and new colonies are in the offing. The Government Headquarters Hospital, the Madurai Medical College, Lady Doak College and other important institutions are located in this zone. This zone may perhaps be described as the centre of administration of the city and the district.

Third Zone

The portion to the west of Madras-Madurai-Rameswaram railway line may be called the third zone. The area adjacent to the station in this zone is occupied by the railway colony. The District Jail, the Meenakshi Mills, Madurai Mills,


VELLORE CITY
(Not to Scale)
PORTION OF PALAR RIVER
Nakkal Channel
Sewage Pumping Station
KATPADI ROAD
ARCOT ROAD
SENPAKKAM ROAD
BANGALORE BYE PASS ROAD
ARUKANDAMPUNDI
TOTTAPALAYAM
PILLAIYAR KOVIL STREET
American Mission Women Hospital
Post Office
Veterinary Hospital
Vellore Town R S
BANGALORE ROAD
Jalakanteswarar Temple
Military Hospital
Dist. Munsiff's Court
FORT RD.
Bus Stand
MANDI ST.
P &T. Office
Sub-Collector's Office
Taluk Office
Collector's Office
Hyder Mahal
Police Training School
Sub Jail
FORT ROUND RD.
FORT ROAD
HIGH ROAD
ARANI
LONG BAZAAR STREET
MAIN
BAZAAR
KURUKKU ROAD
SHARPANA ROAD
FORT ROUND ROAD
Govt Pentland Hospital
Sub - Magistrate's Court
Municipal Office
Suriya Kulam
INFANTRY ROAD
LINES ROAD
Arcot Mission College
GODOWN STREET
LEATHER
VASANTHAPURAM
Vellore Cantonment R. S.
Travellers Bungalow
OFFICERS
SULLIVANPET
CUSBAH
ADAVANANDAL
VELAPADI ROAD
VELAPADI
RAMANAYAKANPALAYAM
PILLAIYAR KOVIL STREET
SHAIK ABDUL KHADER SAHIB ST.
Vellore Club
TORAPADI ROAD
ALLAPURAM ROAD
SANKARAMPALAYAM RD.
1
2
3
4
5
6
7
8
9
10
11
12
13
REFERENCE
City Boundary
Ward Boundary & Number
Road
Railway Line
Important Place
Tank
Industrial Area
New Residential Area
CENSUS-MADRAS

The Bakiyathus Salahatts Arabic College, Vellore has courses in Urdu, Arabic and Persian. Students from abroad are also studying in this college whose strength is 150. It is affiliated to the University of Madras. A description of Vellore may be incomplete without a reference to the Central Jail there, even though it is situated outside the city limits. It is the biggest of its kind in Madras State. There are separate prisons for 4,500 men and 1,200 women. In the State, this is the only jail which has got separate accommodation for women prisoners. Vellore Jail holds an important place in the history of Freedom Movement as many eminent political leaders were interned there.

In respect of area and population, Vellore comes ninth and seventh respectively among Class I cities in the State. It was a Class III town till 1911. During the period 1921 to 1941, it was categorised as Class II town. In 1951, when its population exceeded one lakh (106,024) it became a class I city. During the six decades 1901 to 1961, the population of Vellore has increased by 161 per cent. During the decade 1951—61, however, the percentage increase in population is only 7.28 as against the 11.85% increase in the State population. As regards the density of population, the city occupies the sixth place among the Class I cities (27,276 per sq. mile). Vellore with 13,375 houses stands last among the cities as far as the number of occupied residential houses is concerned.

Katpadi, situated on the northern side of Palar is connected with Vellore by a road bridge over the river. Katpadi railway junction, which is at a distance of 8 kilometres from Vellore, is on the broad gauge line from Madras to Bangalore, Mangalore and Cochin. People coming by rail from these cities to Vellore have necessarily to pass through Katpadi. Katpadi and Vellore are also connected by a metre gauge line from Villupuram to Pakala. Within Vellore city, there are two stations on this line called the Vellore Town and Vellore Cantonment.

The growth of Vellore is closely linked with that of nearby Katpadi though the latter comes under the administrative jurisdiction of Gudiyatham taluk. A number of industries are coming up in the area between Vellore and Katpadi. A steel rolling mill in the private sector with British collaboration is in the offing. The furniture industry is making rapid strides owing to easy availability of timber from the adjoining Chittoor forests in Andhra Pradesh. A new township has sprung up in Katpadi with modern types of bungalows, the majority of its residents being the people of Vellore. A few Government offices, firms and educational institutions including a Women's College have been located here. Between Vellore and Katpadi, the twin towns as they may be called, town buses ply at regular intervals and there is considerable movement of population between the two places daily.

Vellore is connected with other important towns of the district like Arcot, Arni, Tiruvannamalai, Polur, Chengam etc. by buses. Recognising the importance of Vellore, the State Transport Department is running long distance buses connecting Vellore with Madras, Bangalore, Tiruchirapalli and Coimbatore. Buses owned by private companies are also run between Vellore and places like Madras, Salem and Krishnagiri.

The Vellore municipality has been striving to provide all civic amenities to the citizens. Though formerly there was water scarcity in the city, it has been successfully tackled by supply of water from Palar springs. Vellore has thus been maintaining its importance by virtue of its strategic location, though it has no natural advantages such as a seacoast, or a navigable river. Owing to its commercial activities, the hospital and other educational institutions, its population is on the increase giving rise to an expansion of the city in the suburban areas.

Predominant functional characteristics of cities and towns

22. The cities and towns have been classified according to their predominant functional characteristics. Madras, Tuticorin, Nagapattinam and Cuddalore fall under the category 'Port'. Of these, Tuticorin and Cuddalore are typical ports whose growth depend on the location of the port in that area. Madras has no doubt developed on the basis of the existence of the harbour in the city. But it is a very important administration centre which has also become industrial. The towns falling under the category 'Administrative' are Madurai, Coimbatore, Tiruchirapalli,

TABLE V - 14

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Grand Total	**1,991,602**	...	**48,092**	...	**2,471,091**	...	**34,608**	...	**1,627,861**	...	**2,817,274**
				Class I 9 Towns Population : 3,394,541							
Total 2	**1,853,371**	...	...	...	...	...	...	**7**	**1,541,170**	...	...
Madras (M.C.)	1,729,141	...	...	...	...	...	...	Madurai (M)	424,810	...	...
Tuticorin (M)	124,230	...	...	...	...	...	...	Coimbatore (M)	286,305	...	...
...	...	...	...	...	...	...	...	Tiruchirapalli (M)	249,862	...	...
...	...	...	...	...	...	...	...	Salem (M)	249,145	...	...
...	...	...	...	...	...	...	...	Vellore (M)	113,742	...	...
...	...	...	...	...	...	...	...	Thanjavur (M)	111,099		
...	...	...	...	...	...	...	...	Nagercoil (M)	106,207	...	...
				Class II 19 Towns Population : 1,272,589							
Total 2	**138,231**	...	...	**10**	**723,181**	...	...	**1**	**50,140**	**6**	**361,037**
Cuddalore (M)	79,168	...	...	Dindigul (M)	92,947	...	...	...	...	Valparai (P)	80,023
Nagapattinam (M)	59,063	...	...	Kanchipuram (M)	92,714	...	...	Ootacamund (M)	50,140	Erode (M)	73,762

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class II (Contd.)											
...	...	...	...	Kumbakonam (M)	92,581	...	...	...	...	Pollachi (M)	54,369
...	...	...	...	Tirunelveli (M)	87,988	...	...	...	...	Mayuram (M)	51,393
...	...	...	...	Tiruppur (M)	79,773	...	...	...	...	Palayamcottai (M)	51,002
...	...	...	...	Rajapalayam (M)	71,203	...	...	...	...	Pudukottai (M)	50,488
...	...	...	...	Virudunagar (M)	54,827	...	...	...	...	...	...
...	...	...	...	Karur (M)	50,564	...	...	...	...	...	..
...	...	...	...	Gudiyatham (M)	50,384	...	...	...	...	...	...
...	...	...	...	Aruppukkottai (M)	50,200	...	...	...	...	...	...
Class III 61 Towns Population : 1,874,234											
Total ...	...	...	...	**28**	**827,071**	**1**	**30,658**	**1**	**25,977**	**31**	**990,528**
...	...	...	...	Srivilliputtur (M)	46,816	Arkonam (M)	30,658	Chingleput (M)	25,977	Tiruvannamalai (M)	46,441

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class III (Contd.)											
...	...	...	...	Golden Rock (P)	43,120	...	...	...	...	Bodi-nayakanur (M)	44,914
...	...	...	...	Vaniyambadi (M)	42,048	...	...	...	...	Karaikudi (M)	43,698
...	...	...	...	Kadaya-nallur (P)	41,249	...	...	...	...	Villupuram (M)	43,496
...	...	...	...	Melapala-yam (M)	38,806	...	...	...	...	Srirangam (M)	41,949
...	...	...	...	Tiruvattiyur (M)	37,571	...	...	...	...	Chidam-baram (M)	40,694
...	...	...	...	Tenkasi (P)	34,403	...	...	...	...	Palni (M)	39,832
...	...	...	...	Kovilpatti (P)	33,305	...	...	...	...	Ambur (M)	39,455
	...	...	...	Vikramasinga-puram (P)	32,978	...	...	...	...	Mettupala-yam (M)	36,496
..	...	...	...	Arni (M)	31,351	...	...	...	...	Periyakulam (M)	36,335
...	...	...	...	Sivakasi (M)	30,690	...	...	...	...	Tindivanam (M)	34,342
...	...	...	...	Puliyangudi (P)	30,648	...	...	...	...	Mannargudi (M)	33,558

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class III (Contd.)											
...	...	...	...	Kurichi (P)	28,407	...	...	...	...	Tambaram (P)	33,500
...	...	...	...	Udumalpet (M)	28,345	...	...	...	...	Cumbum (M)	32,517
...	...	...	...	Paramakudi (P)	25,368	...	...	...	...	Tiruppattur (M)	30,799
...	...	...	...	Arcot (M)	25,029	...	...	...	...	Coonoor (M)	30,690
...	...	...	...	Kumara-palayam (P)	24,757	...	...	...	...	Tiruvarur (M)	30,137
...	...	...	...	Singanallur (P)	24,674	...	...	...	...	Attur (P)	29,018
...	...	...	...	Edappadi (P)	24,366	...	...	...	...	Dharma-puri (P)	28,031
...	...	...	...	Sankaranayinar-koil (P)	24,089	...	...	...	...	Mettur (M.T C)	27,698
...	...	...	...	Rasipuram (M)	23,871	...	...	...	...	Gopichetti-palayam (M)	27,004
...	...	...	...	Uppilipalayam (P)	23,207	...	...	...	...	Ramanatha-puram (M)	26,890
...	...	...	...	Ranipet (M)	22,974	...	...	...	...	Dharapuram(M)	26,490

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

	Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
	1	2	3	4	5	6	7	8	9	10	11	12
Class III (Contd.)												
	...	...	...	...	Erode (N.P.)	22,766	...	...	...	...	Devakottai (M)	25,524
	...	...	...	...	Ambasamudram (P)	22,447	...	...	...	...	Pattukkottai (P)	24,726
	...	...	...	...	Nellikuppam (P)	22,168	...	...	...	...	Gudalur (P)	24,635
	...	...	...	...	Tiruchengode (P)	21,386	...	...	...	...	Allinagaram (P)	24,606
	...	...	...	...	Kallidaikurichi(P)	20,232	...	...	...	...	Krishnagiri (P)	23,827
	...	...	...	...	...	...	...	...	...	...	Alandur (P)	22,112
	...	...	...	...	...	...	...	...	...	...	Chinna-manur (P)	20,586
	...	...	...	...	...	...	...	...	...	...	Shencottah (M)	20,528
Class IV 119 Towns Population : 1,624,376												
Total	...	...	**3**	**42,602**	**41**	**569,536**	...	...	**1**	**10,574**	**74**	**1,001,664**
	...	...	Kilakarai (P)	16,860	Pernam-bathi (P)	19,515	...	...	Manamadurai (P)	10,574	Namakkal (P)	19,935

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	Ilayangudi (P)	14,433	Madakulam (P)	19,209	...	...	...	...	Kottur (M)	19,862
...	...	Pallapatti (P)	11,309	Tirupparan-kunram (P)	18,750	...	...	...	...	Tiruvallur (M)	19,757
...	...	...	...	Peelamedu (P)	18,437	...	...	...	...	Sirkali (P)	19,531
...	...	...	...	Chinnalapatti (P)	17,963	...	...	...	...	Satyamanga-lam (P)	19,236
...	...	...	...	Kaniamuthur (P)	17,327	...	...	...	...	Panruti (P)	18,754
...	...	...	...	Viravanallur (P)	16,554	...	...	...	...	Vedaranyam (P)	18,033
...	...	...	...	Jalarpet (P)	16,411	...	...	...	...	Tirumangalam (P)	17,633
...	...	...	...	Pallavaram (P)	16,253	...	...	...	...	Ayakudi (P)	17,077
...	...	...	...	Bhavani (P)	15,860	...	...	...	...	Turaiyur (P)	15,939
...	...	...	...	Suramangalam (P)	15,805	...	...	...	...	St. Thomas Mount (Cantt.)	15,790
...	...	...	...	Sattur (P)	15,759	...	...	...	...	Usilampatti (P)	15,781
...	...	...	...	Tiruvattipuram (P)	15,386	...	...	...	...	Colachel (M)	15,673

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	...	...	Udangudi (P)	15,267	...	...	...	...	Sivaganga (P)	15,642
...	...	...	...	Villivakkam (P)	15,203	...	...	...	...	Kotagiri (P)	15,509
...	...	...	...	Arumuganeri (P)	14,904	...	...	...	...	Sendamangalam (P)	15,320
...	...	...	...	Visharam (P)	14,441	...	...	...	...	Portonovo (P)	15,139
...	...	...	...	Ganapathi (P)	14,176	...	...	...	...	Tiruchendur (P)	15,182
...	...	...	...	Tisayanvilai (P)	13,758	...	...	...	...	Melur (P)	14,829
...	...	...	...	Jayamkonda-cholapuram (P)	13,531	...	...	...	...	Polur (P)	14,764
...	...	...	...	Vasudevanallur (P)	13,250	...	...	...	...	Tranquebar (P)	14,754
...	...	...	...	Vellalur (P)	13,277	...	...	...	...	Vettaikaran-pudur (P)	14,515
...	...	...	...	Walajapet (P)	13,179	...	...	...	...	Tirupattur (P)	14,510
...	...	...	...	Avaniapuram (P)	13,151	...	...	...	...	Padmanabha-puram (M)	14,491
...	...	...	...	Tirukkalikun-dram (P)	12,881	...	...	...	...	Vriddhachalam (P)	14,350
...	...	...	...	Wandiwash (P)	12,546	...	...	...	...	Sholavandan (P)	14,114

TABLE V - 14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	...	...	Madukkarai (N.P.)	12,488	...	...	...	...	Uttamapala-yam (P)	14,110
...	...	...	...	Tachchanallur (P)	12,252	...	...	...	...	Maduranthakam (P)	13,968
...	...	...	...	Kunrathur (P)	12,244	...	...	...	...	Kuthanallur (P)	13,948
...	...	...	...	Kurinjipadi (P)	12,185	...	...	...	...	Uttaramerur (P)	13,879
...	...	...	...	Sholinghur (P)	11,480	...	...	...	...	Lalgudi (P)	13,874
...	...	...	...	Bhuvanagiri (P)	11,237	...	...	...	...	Kulittalai (P)	13,755
...	...	...	...	Ambathur (P)	11,128	...	...	...	...	Tirukkoyilur (P)	13,739
...	...	...	...	Sattankulam (P)	10,974	...	...	...	...	Kuzhithurai (P)	13,708
...	...	...	...	Mallasamudram (P)	10,720	...	...	...	...	O'Valley (P)	13,547
...	...	...	...	Kulasekara-pattinam (P)	10,679	...	...	...	...	Tiruthuraipundi (P)	13,508
...	...	...	...	Chinnasalem (P)	10,485	...	...	...	...	Kayalpattinam (P)	13,432
...	...	...	...	Kallakudi (P)	10,377	...	...	...	...	Kallakurichi (P)	13,312

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	...	...	Cheranmahadevi (P)	10,309	...	...	...	...	Adirampattinam (P)	13,309
...	...	...	...	Ettaiyapuram (P)	10,135	...	...	...	...	Panagudi (P)	13,265
...	...	...	...	Manachanallur (P)	10,050	...	...	...	...	Avadi Panchayat (P)	13,050
...	...	...	...	...	...	...	...	...	...	Musiri (P)	13,001
...	...	...	...	...	...	...	...	...	...	Kodaikanal (T)	12,860
...	...	...	...	...	...	...	...	...	...	Natham (P)	12,757
...	...	...	...	...	...	...	...	...	...	Ariyalur (P)	12,658
...	...	...	...	...	...	...	...	...	...	Srivaikuntam (P)	12,590
...	...	...	...	...	...	...	...	...	...	Wellington (Cantt.)	12,067
...	...	...	...	...	...	...	...	...	...	Poonamallee (P)	11,900
...	...	...	...	...	...	...	...	...	...	Mannargudi (P)	11,767
...	...	...	...	...	...	...	...	...	...	Seithur (P)	11,685

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	...	...	...	...	...	...	...	...	Seithur (P)	11,685
...	...	...	...	...	...	...	...	...	...	Hosur (P)	11,683
...	...	...	...	...	...	...	...	...	...	Karamadai (P)	11,649
...	...	...	...	...	...	...	...	...	...	Manapparai (P)	11,644
...	...	...	...	...	...	...	...	...	...	Watrap (P)	11,383
...	...	...	...	...	...	...	...	...	...	Kombai (P)	11,317
...	...	...	...	...	...	...	...	...	...	Muthupet (P)	11,247
...	...	...	...	...	...	...	...	...	...	Denkanikota (P)	11,215
...	...	...	...	...	...	...	...	...	...	Thevaram (P)	11,180
...	...	...	...	...	...	...	...	...	...	Tiruvaiyaru (P)	11,171
...	...	...	...	...	...	...	...	...	...	Perambalur (P)	11,168
...	...	...	...	...	...	...	...	...	...	Anamalai (P)	11,072
...	...	...	...	...	...	...	...	...	...	Chetpet (P)	10,929
...	...	...	...	...	...	...	...	...	...	Nazareth (P)	10,899

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class IV (Contd.)											
...	...	...	...	...	...	...	...	...	...	Devarshola (P)	10,711
...	...	...	...	...	...	...	...	...	...	Pallikonda (P)	10,578
...	...	...	...	...	...	...	...	...	...	Vattalakundu (P)	10,519
...	...	...	...	...	...	...	...	...	...	Tiruttani (P)	10,324
...	...	...	...	...	...	...	...	...	...	Neyveli Lignite Corporation (N.P.)	10,296
...	...	...	...	...	...	...	...	...	...	Arantangi (P)	10,258
...	...	...	...	...	...	...	...	...	...	Tiruppuvanam (P)	10,226
...	...	...	...	...	...	...	...	...	...	Valavanur (P)	10,167
...	...	...	...	...	...	...	...	...	...	Nelliyalam (P)	10,166
...	...	...	...	...	...	...	...	...	...	Elumalai (P)	10,036
...	...	...	...	...	...	...	...	...	...	Kamudi (P)	10,017
Class V 95 Towns Population : 714,812											
Total ...	...	**1**	**5,490**	**40**	**310,876**	...	...	...	...	**54**	**398,446**
...	...	Karambakudi (P)	5,490	Punjaipugalur (P)	9,983	...	...	...	...	Sulur (P)	9,903

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class V (Contd.)											
...	...	...	...	Proddatur-pet (P)	9,964	...	...	...	...	Palladam (P)	9,806
...	...	...	...	Andipatti Jakkampatti (P)	9,634	...	...	...	...	Avanashi (P)	9,796
...	...	...	...	Ayyampettai (P)	9,618	...	...	...	...	Naduvattam (P)	9,781
...	...	...	...	Pattamadai (P)	9,552	...	...	...	...	Papanasam (P)	9,705
...	...	...	...	Kattukuppam (P)	9,283	...	...	...	...	Thottiam (P)	9,549
...	...	...	...	Ammapettai (P)	9,258	..	...	...	...	Kaveripat-nam (P)	9,416
...	...	...	...	Eruvadi (P)	9,246	...	...	...	...	Kalambur (P)	9,343
...	...	...	...	Taramangalam (P)	9,243	...	...	...	...	Tiruvada-marudhur (P)	9,194
...	...	...	...	Emaneswarm (P)	9,153	...	...	...	...	Harur (P)	9,075
...	...	...	...	Jalakandapuram (P)	9.136	...	...	...	...	Ponnamara-vati (P)	9,027
...	...	...	...	Tattayyangarpet (P)	8,960	...	...	...	...	Darapadavedu (P)	9,018
...	...	...	...	Chettiyarpatti (P)	8,718	...	...	...	...	Annur (P)	8,884

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class V (Contd.)											
...	...	...	...	Velampalayam (P)	8,396	...	...	...	...	Aduthurai (P)	8,587
...	...	...	...	Walajabad (P)	8,304	...	...	...	...	Kuttalam (P)	8,519
...	...	...	...	Anakudi Tiru-nageswaram (P)	8,254	...	...	...	...	Gudalur (P)	8,328
...	...	...	...	Jarikondalam-patti (P)	8,184	...	...	...	...	Vallam (P)	8,273
...	...	...	...	*Sawyerpuram (P)*	8,060	...	...	...	...	Kodavasal (P)	8,148
...	...	...	...	Kaveripakkam (P)	7,893	...	...	...	...	Tirukattu-palli (P)	8,038
...	...	...	...	Attayampatti (P)	7,666	...	...	...	...	Nannilam (P)	7,874
...	...	...	...	Vennandur (P)	7,624	...	...	...	...	Ponneri (P)	7,740
...	...	...	...	Paramankurichi (P)	7,570	...	...	...	...	Nilakkottai (P)	7,661
...	...	...	...	Udaiyarpalayam (P)	7,524	...	...	...	...	Kattuputhur	7,516
...	...	...	...	*Anakaputtur (P)*	7,460	...	...	...	...	Srimushnam (P)	7,354
...	...	...	...	Kalugumalai (P)	7,403	...	...	...	...	Tirumalaivasal (P)	7,326
...	...	...	...	Omalur (P)	7,151	...	...	...	...	Pennadam (P)	7,316

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communications		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class V (Contd.)											
...	...	...	...	Arani (P)	7,089	...	...	...	...	Orathanad (P)	7,152
...	...	...	...	*Pillanallur (P)*	6,883	...	...	...	...	Jagathala (P)	7,109
...	...	...	...	Brahmana Peria-Agraharam (P)	6,714	...	...	...	...	Sriperumbudur (P)	7,085
...	...	...	...	Kadambur (P)	6,648	...	...	...	...	Ulundurpet (P)	7,070
...	...	...	...	Morupatti (P) (Mettupalayam)	6,626	...	...	...	...	Valangiman (P)	6,910
...	...	...	...	Singampuneri (P)	6,471	...	...	...	...	Thallakulam (P)	6,892
...	...	...	...	Eral (P)	6,446	...	...	...	...	Bhavani (P) (Thottipalayam)	6,853
...	...	...	...	Sathuvacheri (P)	6,371	...	...	...	...	Rameswarm (P)	6,801
...	...	...	...	Elampillai (P)	6,193	...	...	...	...	Alwartirunagari(P)	6,753
...	...	...	...	Puvalur (P)	6,135	...	...	...	...	Torappadi (P)	6,720
...	...	...	...	Udayendram (P)	5,882	...	...	...	...	Ponmeni (P)	6,638
...	...	...	...	Mudalur (P)	5,643	...	...	...	...	Abiramam (P)	6,635
...	...	...	...	Panapakkam (P)	5,370	...	...	...	...	Cheyyur (P)	6,626

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class V (Contd.)											
...	...	...	...	Kayattar (P)	5,168	...	...	...	...	Tondi (P)	6,422
...	...	...	...	...	...	...	...	...	...	Mandapam (P)	6,257
...	...	...	...	...	...	...	...	...	...	Peraiyur (P)	5,993
...	...	...	...	...	...	...	...	...	...	Nanguneri (P)	5,937
...	...	...	...	...	...	...	...	...	...	Kottaiyur (P)	5,778
...	...	...	...	...	...	...	...	...	...	Palayampatti (P)	5,777
...	...	...	...	...	...	...	...	...	...	Kandanur (P)	5,644
...	...	...	...	...	...	...	...	...	...	Pallathur (P)	5,560
...	...	...	...	...	...	...	...	...	...	Aravakurichi (P)	5,489
...	...	...	...	...	...	...	...	...	...	Thondamuthur (P)	5,400
...	...	...	...	...	...	...	...	...	...	Alangudi (P)	5,304
...	...	...	...	...	...	...	...	...	...	Konakkarai (P)	5,228
...	...	...	...	...	...	...	...	...	...	Arimalam (P)	5,164

TABLE V-14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class V (Contd.)											
...	...	...	...	...	...	...	...	...	...	Vaitheeswaran-koil (P)	5,045
...	...	...	...	...	...	...	...	...	...	Kiranur (P)	5,027
				Class VI	**36 Towns**	**Population : 109,976**					
Total ...	...	...	...	**13**	**40,427**	**1**	**3,950**	...	...	**22**	**65,599**
...	...	...	...	Labbaikudi-kadu (P)	4,638	Abisheka-puram	3,950	...	...	Kanadukathan (P)	4,973
...	...	...	...	Issa Pallava-ram (P)	4,316	...	...	...	...	Needamangalam (P)	4,896
...	...	...	...	Darasuram (P)	4,165	...	...	...	...	Karivalamvanda-nallur (P)	4,568
...	...	...	...	Toppampalayam (P)	3,913	...	...	...	...	Nattarasankottai (P)	4,511
...	...	...	...	Nekkundram (P)	3,325	...	...	...	...	Puduvayal (P)	4,468
...	...	...	...	Erukkancheri (P)	3,131	...	...	...	...	Pulicat (M)	4,009
...	...	...	...	Cordite Factory in Aravankadu (N.P.)	3,126	...	...	...	...	Vilathikulam (P)	3,951
...	...	...	...	Milavittan (P)	3,126	...	...	...	...	Ramachandra puram-(P)	3,828

TABLE V - 14 (Contd.)

Classification of cities and towns according to their predominant functional characteristics, 1961

Port		Trade and Commercial		Industrial and Manufacturing		Transport and Communication		Administrative		Residential and Educational	
Name	Population	Name	Population	Name	Population	Name	Population	Name	Population	Name	Population
1	2	3	4	5	6	7	8	9	10	11	12
Class VI (Contd.)											
...	...	...	...	Jaffarabad (P)	2,761	...	...	...	...	Nambuthalai (P)	3,812
...	...	...	...	Konavattam (P)	2,648	...	...	...	...	Masinagudi (P)	3,465
...	...	...	...	Palavanthangal (P)	2,266	...	...	...	...	Devasthanam (P)	3,109
...	...	...	...	Padukapathu (P)	1,643	...	...	...	...	Pillamangalam (Alagapuri) (P)	3,077
...	...	...	...	Tirusoolam (P)	1,369	...	...	...	...	Bhavanisagar (T)	2,984
...	...	...	...	...	...	...	...	...	...	Tirumayam (P)	2,522
...	...	...	...	...	...	...	...	...	...	Vadakkupoyyur (P)	2,242
...	...	...	...	...	...	...	...	...	...	Kilasevalpatti (P)	2,196
...	...	...	...	...	...	...	...	...	...	Koyambedu (P)	2,125
...	...	...	...	...	...	...	...	...	...	Meenambak-kam (P)	1,596
...	...	...	...	...	...	...	...	...	...	Sathamangalam (P)	1,432
...	...	...	...	...	...	...	...	...	...	Selaiyur (P)	829
...	...	...	...	...	...	...	...	...	...	Courtallam (P)	813
...	...	...	...	...	...	...	...	...	...	Eranavur (N.P.)	193

(Contd. from Page 223)

Salem, Vellore, Thanjavur, Nagercoil and Ootacamund. But development of these places is to a great extent due to the location of the administrative headquarters. Whatever characteristics they may have acquired later, the basic pattern of growth is based on their administrative importance.

A few fall under "Trade and Commerce" chiefly in Class IV, Kilakarai, Ilayankudi and Pallapatti. The bulk of the towns in Madras State falls under two main categories—"Industrial and Manufacturing" and "Residential and Educational." The category 'Industrial and Manufacturing' includes old places of importance where household industry have been located. They also include those places where new industries have been established in the recent decades. 'Residential and Educational' is a classification which applies to a series of towns not otherwise classifiable. They include towns like Pollachi which has an important shandy and Villupuram which is an important railway station. The growth of these towns has been to a certain extent influenced by the establishment of educational institutions — for instance Palayamcottai in Tirunelveli district.

To my mind though the classification has been done on a functional basis, it is very difficult to locate a town in Madras State which has only one functional characteristic.

In the next table is classified towns according to predominant characteristics. They again fall under categories 'Port', 'Trade and Commerce' and 'Industrial and Manufacturing'. They generally conform to the important industry practised in the particular town. A similar classification has been made for the town groups both under functional and occupational characteristics.

TABLE V - 15

Classification of towns according to predominant characteristics

A. PORT

1.	Madras	...	Flour mills, Rubber tyres and tubes, Electrical cables, wires, motors, transformes etc., Type foundries, Forging foundries, Plastic goods, Leather and foot wear, Structural engineering goods, Metal boxes and containers, Automobiles, Automobile parts and accessories, Chemicals and pharmaceuticals, Paints and varnishes, Textile mills, Locomotive works, Railway coaches, Motion picture studios, Oil mills, Optical goods, Petroleum and kerosene storage and distribution, Milk factory, Jewellery works. State and District headquarters.
2.	Tuticorin	...	Rice, Oil and Cotton ginning mills, Textile spinning mills, Salt factories, Miscellaneous Manufacturing Industries. Revenue division headquarters.
3.	Cuddalore	...	Chemical, Sugar mills, Rice, Oil and ginning mills, Motor repairing workshops, Printing press including lithographic printing, Carpentry and blacksmithy workshops. District and Taluk headquarters.
4.	Nagapattinam	...	Steel rolling mills. Taluk headquarters.

B. TRADE AND COMMERCIAL

1.	Kilakarai	...	
2.	Ilayangudi	...	
3.	Pallapatti	...	Matches
4.	Karambakudi	...	

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

C. INDUSTRIAL AND MANUFACTURING

1. Dindigul	...	Lock and iron safes, Cigar and cheroot factories, Tobacco factory, Textile mills, Flour mills, Rice, Oil and Cotton ginning mills, Leather works, Tanneries, Printing works. Taluk and Revenue division headquarters.
2. Kanchipuram	...	Silk handloom weaving, Rice and Flour mills, Printing works. Taluk headquarters.
3. Kumbakonam	...	Metal vessels factory, Silk and Cotton handloom textiles, Rice and Flour mills, Perfumery industries. Printing works. Taluk and Revenue division headquarters.
4. Tirunelveli	...	Wheat products, Chemicals, Handloom textiles, Printing works, Textile mill. District, Taluk and Revenue division headquarters.
5. Tiruppur	...	Metal industries, Hosiery, Spinning and weaving mills, Rice, Oil and ginning mills, Printing works, Vessels, Plastic bags. Taluk headquarters.
6. Rajapalayam	...	Wood screws, Wire nails, Chip board, Cotton spinning mills, Surgical cotton mills, Handloom textiles, Rice, Oil, Flour and Cotton ginning mills, Iron and steel industries (Agri.), Printing works.
7. Virudunagar	...	Matches, Metal industries, Rice, Oil and Cotton ginning mills, Printing works.
8. Karur	...	Metal works, Spinning and weaving industries, Rice, Oil and Cotton ginning mills. Taluk and Revenue division headquarters.
9. Gudiyatham	...	Rice and Flour mills, Textile mills, Silk mills, General and jobbing engineering works, Matches, Tanneries, Printing and lithographic printing, Cotton handloom textiles. Taluk headquarters.
10. Aruppukkottai	...	Metal industries, Rice, Oil and Cotton ginning mills, Printing works. Taluk headquarters.
11. Srivilliputtur	...	Matches, Rice, Oil and Cotton ginning mills, Charka works. Taluk headquarters.
12. Golden Rock Rly. Colony		Locomotive workshop.
13. Vaniyambadi	...	Rice and Oil mills, Tanneries, Beedi, Mat weaving, Jaggery.
14. Kadayanallur	...	Cotton handloom textiles.
15. Melapalayam	...	Cotton handloom textiles, Rice, Oil and Cotton ginning mills, Tanning of leather, Beedi.
16. Tiruvattiyur	...	Machineries, Matches, Batteries, Motor cycles, Scooters, Metal Boxes, Glass products, Abrasives, Grinding wheels, Cells manufacture, Gas industries, Rice mills, Printing works, Timber works,

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

17.	Tenkasi	...	Rice and Oil mills. Taluk headquarters.
18.	Kovilpatti	...	Fire works, Paints, Chemicals and Varnishes, Charka works, Textile mills, Cotton ginning mills, Manufacture of bolts, nuts, nails. Taluk headquarters.
19.	Vikramasingapuram	...	Cotton and silk textiles, Cotton spinning mills.
20.	Arni	...	Silk and Cotton textiles, Rice, Oil and ginning mills, Electric engineering works, Printing works. Taluk headquarters.
21.	Sivakasi	...	Matches, Amorces, Litho printing, Rice mills, Wire cutting factory. Revenue division headquarters.
22.	Puliyangudi	...	Printing works, Cotton textiles.
23.	Kurichi	...	Rice and Oil mills, Cotton ginning mills, Textile mills, Railway junction, Railway workshop.
24.	Udumalpet	...	Textile mills, Rice and Cotton ginning mills, Printing works, Foundry, Electric motors and pumpsets, Bone fertilizers. Taluk headquarters.
25.	Paramakudi	...	Rice mills. Taluk headquarters.
26.	Arcot	...	Rice and Oil mills.
27.	Kumarapalayam	...	Handloom textiles, Ribbon, Rayon textiles, Wicks, Ginning, Dyeing.
28.	Singanallur	...	Electrical motors and pumpsets, Welding Generators, Textile mills, Oil and Cotton ginning mills.
29.	Edappadi	...	Cotton textiles, Oil expellers.
30.	Sankaranayinarkoil	...	Soap works, Matches. Taluk headquarters.
31.	Rasipuram	...	Rice and Oil mills, Jowar factory, Brass and Copper vessels, Cotton textiles. Taluk headquarters.
32.	Uppilipalayam	...	Rice, Oil and Cotton ginning mills, Textile mills.
33.	Ranipet	...	Ceramics, Fertilizers and chemicals, Rice and Flour mills, Electric works, Sugar mill, Tanneries. Revenue division headquarters.
34.	Erode	...	Handloom textiles, Motor starters both air and oil break type, Rice, Oil, and Flour mills, Switch gear industries, Matches, Printing, Processing of cotton textiles, Topiaco, Foundry works. Taluk and Revenue division headquarters.
35.	Ambasamudram	...	Chemicals, Paper mill. Taluk headquarters.
36.	Nellikuppam	...	Sugar mills, Electric works, Confectionery, Distilled spirit.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

37.	Tiruchengode	...	Rice, Oil and Cotton ginning mills, Cotton textiles, Textile mills, Silk weaving. Taluk headquarters.
38.	Kallidaikurichi	...	Metal industries.
39.	Pernambathi	...	Tanneries.
40.	Madakulam	...	
41.	Tirupparankunram	...	
42.	Peelamedu	...	Agricultural implements, Textile mills.
43.	Chinnalapatti	...	Handloom textiles, Rice and Oil mills.
44.	Kaniamuthur	...	Rice, and Flour mills, Plastic Buttons.
45.	Viravanallur	...	Handloom textiles, Cotton spinning mill, Bone fertilizer.
46.	Jalarpet	...	
47.	Pallavaram	...	Tanneries, Leather goods, Electric works, Flour mill, Pharmaceuticals, Stone quarries, Sewing machines.
48.	Bhavani	...	Spinning and weaving, Carpets, Rice, Oil and Cotton ginning mills. Taluk headquarters.
49.	Suramangalam	...	Magnesite refractories, Flour mill.
50.	Sattur	...	Matches. Taluk headquarters.
51.	Tiruvattipuram	...	Silk textiles. Taluk and Revenue division headquarters.
52.	Udangudi	...	
53.	Villivakkam	...	Automobile wheels manufacturing.
54.	Arumuganeri	...	Salt and Jaggery.
55.	Visharam	...	Tanneries.
56.	Ganapathi	...	Electrical starters, Switches, Motor starters, Iron clad switches, Rice and Cotton ginning mills, Agricultural implements, Textile mills.
57.	Tisayanvilai	...	

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

58.	Jayamkondacholapuram	...	Taluk headquarters.
59.	Vellalur	...	
60.	Walajapet	...	Carpet and Druggets, Rice mills, Cotton textiles. Taluk headquarters.
61.	Avaniapuram	...	
62.	Tirukkalikundram	...	Rice mill.
63.	Wandiwash	...	Rice mill, Mat weaving. Taluk headquarters.
64.	Madukkarai	...	Bobbin manufacturing, Cement factory.
65.	Tachchanallur	...	Metal rolling mills.
66.	Kunrathur	...	Handloom textiles.
67.	Kurinjipadi	...	Rice mills, Cotton textiles.
68.	Sholinghur	...	Pilgrim centre.
69.	Bhuvanagiri	...	Rice and Flour mills, Cotton textiles.
70.	Ambathur	...	Bicycles, Dynamo lamps for scooters and motor cycles, Chains etc., Tyres and Tubes.
71.	Sattankulam	...	Matches, Jaggery and country sugar.
72.	Mallasamudram	...	Handloom textiles.
73.	Kulasekarapattinam	...	Matches, Port, Salt manufacture.
74.	Chinnasalem	...	Rice mills.
75.	Kallakudi	...	Cement factory.
76.	Cheranmahadevi	...	Cotton textiles, Potteries, Tiles and Bone fertilizers. Revenue division headquarters.
77.	Ettaiyapuram	...	Cotton ginning mills, Matches.
78.	Manachanallur	...	Rice mills.
79.	Vasudevanallur	...	Cotton textiles.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

80.	Punjaipugalur	...	Sugar mills.
81.	Proddaturpet	...	Handloom textiles.
82.	Andipatti Jakkampatti	...	
83.	Ayyampettai	...	Rice mills, Silk textiles.
84	Pattamadai	...	Mat weaving.
85.	Kattukuppam	...	
86.	Ammapettai	...	Rice mills.
87.	Eruvadi	...	Cotton textiles.
88.	Taramangalam	...	
89.	Emaneswaram	...	Handloom textiles.
90.	Jalakandapuram	...	
91.	Tattayyangarpet	...	
92.	Chettiyarpatti	...	Weaving industries.
93.	Velampalayam	...	
94.	Walajabad	...	Rice mills.
95.	Anakudi Tirunageswaram	...	Cotton textiles.
96.	Jarikondalampatti	...	
97.	Sawyerpuram	...	Cotton textiles.
98.	Kaveripakkam	...	
99.	Attayampatti	...	
100.	Vennandur	...	
101.	Paramankurichi	...	Cotton textiles, Jaggery
102.	Udaiyarpalayam	...	Rice mill.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

103.	Anakaputtur ...	
104.	Kalugumalai ...	Matches.
105.	Omalur ...	Dalmia magnasite, Belpahar refractories.
106.	Arani ...	Cotton textiles.
107.	Pillanallur ...	
108.	Brahmana Peria Agraharam ...	Tanneries.
109.	Kadambur ...	Cotton ginning mills, Bone fertilizers.
110.	Morupatti(Mettupalayam)...	
111.	Singampuneri ...	Oil and Rice mills.
112.	Eral ...	Cotton ginning mills, Khadi, Bell metal industries.
113.	Sathuvacheri ...	
114.	Elampillai ...	Silk weaving.
115.	Puvalur ...	Rice mills.
116.	Udayendram ...	
117.	Mudalur ...	
118.	Panapakkam ...	
119.	Kayattar ...	Mats, Cotton textiles.
120.	Labbikudikadu ...	
121.	Issa Pallavaram ...	Tanneries, Leather works.
122.	Darasuram ...	Cotton and Silk textiles.
123.	Thoppampalayam ...	
124.	Nekkundram ...	
125.	Erukkancheri ...	

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

126.	Cordite factory in Aravankadu ...	Explosives and Ammunitions.
127.	Milavittan ...	
128.	Jaffarabad ...	
129.	Konavattam ..	
130.	Palavanthangal ..	
131.	Padukapathu ..	
132.	Tirusoolam ..	
		D. ADMINISTRATIVE
1.	Madurai ...	Bodies for Buses, Lorries, Vans, etc., Special automobile tools, Spinning and weaving mills, Rubber products, Handloom textiles, Chemicals, Rice, Oil, Flour and Cotton ginning mills, Railway junction, Printing press. District, Taluk and Revenue division headquarters.
2.	Coimbatore ...	Spinning and weaving mills, Electric, Steel industries, Plastics, Printing inks, Rubber products, Handloom textiles, Jewellery works, Agricultural implements, Printing, Rice, Oil and Cotton ginning mills, Flour mills, Railway junction. District, Taluk and Revenue division headquarters.
3.	Tiruchirapalli ...	Chemical industries, Iron and steel industries, Wheat products, Printing and writing paper pulp, Spinning mills, Flour mill, Railway junction, Hydrogenated oil, Jewellery works, Agricultural implements, Tanneries. District, Taluk and Revenue division headquarters.
4.	Salem ...	Pig iron, Paper boards and films, Wheat products, Galvanising plant, Printing works, Ginning mills, Spinning and weaving mills, Handloom textiles, Railway junction, Soft drinks and carbonated water industries, Electric workshops. District, Taluk and Revenue division headquarters.
5.	Vellore ...	Rice, Flour and Oil mills, Tanneries, Cycles and parts, Hospital equipments, Printing and lithographic printing. District and Taluk headquarters.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

6. Thanjavur	...	Art metal wares and handicrafts, Rice and Oil mills, Railway junction, Sugar confectionery, Plastic articles, Printing works. District, Taluk and Revenue division headquarters.
7. Nagercoil	...	Rice and Oil mills, Flour mills, Bakery products, Iron industrial works, Printing works. District and Taluk headquarters.
8. Ootacamund	...	Cinema raw films, Photo films, Photo papers and X-ray films. Summer resort. District and Taluk headquarters.
9. Chingleput	...	Leather works, Railway junction. Taluk and Revenue division headquarters.
10. Manamadurai	...	Railway junction. Tiles and potteries.

E. TRANSPORT AND COMMUNICATION

1. Arkonam	...	Ball bearings, Roller bearings, Rice mills, Railway junction, Railway workshop, Flour mills, Cotton textiles, Beedi, Cement pipes. Taluk headquarters.
2. Abishekapuram	...	

F. RESIDENTIAL AND EDUCATIONAL

1. Valparai	...	Plantations.
2. Erode	...	Motor starter, Flour mill, Rice and Oil mills, Tanneries, Printing works. Taluk and Revenue division headquarters.
3. Pollachi	...	Bodies for buses and lorries, Tyre retreading, Textile mills, Printing, Cotton ginning, Rice and Oil Mills, Flour mills, Pharmaceuticals, Ambar charka works. Taluk and Revenue division headquarters.
4. Mayuram	...	Metal industries, Rice and Oil mills, Printing works. Taluk and Revenue division headquarters.
5. Palayamcottai	...	Rice and Oil mills, Motor servicing and repairing workshops.
6. Pudukottai	...	Bodies for buses, lorries, vans etc., Soap works, Tanneries, Printing works. Revenue division headquarters.
7. Tiruvannamalai	...	Rice and Oil mills, Matches, Printing, Pilgrim centre. Taluk and Revenue division headquarters.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

8.	Bodinayakanur	...	Rice and Oil mills, Tea factory, Printing works.
9.	Karaikudi	...	Rice and Oil mills, Brass vessels factory, Printing works.
10.	Villupuram	...	Rice, Oil and Flour mills, Printing works, Bone fertilizers. Taluk headquarters.
11.	Srirangam	...	Rice, Oil and Flour mills.
12.	Chidambaram	...	Rice and Flour mills, Engineering workshops, Weaving, Sewing thread manufacture, Pilgrim centre. Taluk and Revenue division headquarters.
13.	Palni	...	Rice and Oil mills, Match works, Flour mills, Pressed metal products.
14.	Ambur	...	Sugar mills, Flour mills, Matches, Tanneries.
15.	Mettupalayam	...	Tanning works, Rice mills, Glass and Glass products, Bone fertilizers, Rayon pulp, Artificial diamonds, Dehydrated food-stuffs.
16.	Periyakulam	...	Motor vehicles workshops.
17.	Tindivanam	...	Rice mills, Salt factories, Printing works. Taluk and Revenue division headquarters.
18.	Mannargudi	...	Sugar mills, Rice mills, Brass and Iron vessels, Agricultural implements. Taluk and Revenue division headquarters.
19.	Tambaram	...	Manufacture of professional scientific measuring instruments etc., Cycle industries.
20.	Cumbum	...	Rice mills, Motor vehicles workshops.
21.	Tiruppattur	...	Rice and Oil mills, Cotton Textiles, Sandalwood oil. Taluk and Revenue division headquarters.
22.	Coonoor	...	Frames for the leaf trolleys. Taluk headquarters.
23.	Tiruvarur	...	Spinning and weaving industries, Rice and Flour mills, Perfumes.
24.	Attur	...	Rice mills, Motor servicing workshops, Glass products. Taluk headquarters.
25.	Dharmapuri	...	Rice and Oil mills, Printing works. Taluk and Revenue division headquarters.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

26.	Mettur M. T. C.	...	Steel drums, Heavy chemicals, Soaps, Textile mills, Hydro electricity, Sandalwood oil, Metal rolling.
27.	Gopichettipalayam	...	Metal sheets works, Cotton ginning, Rice mills. Taluk and Revenue division headquarters.
28.	Ramanathapuram	...	Spinning and weaving industry, Rice and Oil mills. Taluk and Revenue division headquarters.
29.	Dharapuram	...	Cotton ginning, Rice and Oil mills, Bus, Car servicing and repairing. Taluk headquarters.
30.	Devakottai	...	Taluk and Revenue division headquarters.
31.	Pattukkottai	...	Rice mills. Taluk and Revenue division headquarters.
32.	Gudalur	...	
33.	Allinagaram	...	
34.	Krishnagiri	...	Taluk headquarters.
35.	Alandur	...	Automobile valves, Electric lamps, Rice, Oil and Flour mills, Metal galvanising, Tinning, Pharmaceutical chemicals.
36.	Chinnamanur	...	Rice and Oil mills, Matches.
37.	Shencottah	...	Rice and Oil mills. Taluk headquarters.
38.	Namakkal	...	Rice and Oil mills. Taluk and Revenue division headquarters.
39.	Kottur	...	
40.	Tiruvallur	...	Fire works and refractories. Rice and Oil mills, Pen factory. Taluk headquarters.
41.	Sirkali	...	Rice and Oil mills, Sugar confectionary. Taluk headquarters.
42.	Satyamangalam	...	Spinning and weaving industries, Rice and Flour mills.
43.	Panruti	...	Cashew kernels, Dolls and Toys, Rice mills.
44.	Vedaranyam	...	Tobacco products, Salt factories.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

45.	Tirumangalam	...	Rice and Flour mills, Cotton ginning mills, Matches, Reinforced concrete construction, Manufacture of tiles and potteries. Taluk headquarters.
46.	Ayakudi	...	Rice and Oil mills.
47.	Turaiyur	...	Rice mills.
48.	St. Thomas Mount	...	Aromatic chemicals, Aerated water works.
49.	Usilampatti	...	Biscuit factory, Rice, Cotton and Oil ginning mills, Flour mills, Tiles manufacturing. Revenue division headquarters.
50.	Colachel	...	Minor port.
51.	Sivaganga	...	Taluk headquarters.
52.	Kotagiri	...	Tea factories.
53.	Sendamangalam	...	Brass vessels, Lac bangles.
54.	Porto Novo	...	Rice mills. Minor port, Cotton textiles, Country drugs, Basket weaving.
55.	Tiruchendur	...	Steel drums, Rice and Flour mills, Matches, Chemicals. Taluk headquarters.
56.	Melur	...	Agricultural implements. Taluk headquarters.
57.	Polur	...	Rice and Oil mills, Cigars. Taluk Headquarters.
58.	Tranquebar	...	Port.
59.	Vettaikaranpudur	...	
60.	Tirupattur	...	Rice, Flour mill. Taluk headquarters.
61.	Padmanabhapuram	...	Revenue division headquarters.
62.	Vriddhachalam	...	Rice mills. Taluk and Revenue division headquarters.
63.	Sholavandan	...	
64.	Uttamapalayam	...	Rice and Oil mills.
65.	Maduranthakam	...	Sugar mills, Rice mills, Tanneries. Taluk headquarters.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

66.	Kuthanallur	...	Rice mills.
67.	Uttaramerur	...	Rice mills.
68.	Lalgudi	...	Sugar mills, Rice and Oil mills. Taluk headquarters.
69.	Kulittalai	...	Taluk headquarters.
70.	Tirukkoyilur	...	Oil mills. Taluk and Revenue division headquarters.
71.	Kuzhithurai	...	Cashew kernels. Taluk headquarters.
72.	O'Valley	...	Tea plantations.
73.	Tiruthuraipundi	...	Taluk headquarters.
74.	Kayalpattinam	...	
75.	Kallakurichi	...	Rice and Oil mills. Taluk headquarters.
76.	Adirampattinam	...	Rice mills, Salt factories, Minor port.
77.	Panagudi	...	Tiles, Cart building, Tobacco curing.
78.	Avadi Panchayat	...	Chemicals, Rubber cables, Railway cables, Steel tubes, Army clothing factory.
79.	Musiri	...	Taluk headquarters.
80.	Kodaikanal	...	Summer resort. Taluk headquarters.
81.	Natham	...	
82.	Ariyalur	...	Revenue division headquarters.
83.	Srivaikuntam	...	Iron and Steel works. Taluk headquarters.
84.	Wellington	...	Military training centre.
85.	Poonamallee	...	Rice mills, Bricks.
86.	Mannargudi	...	Rice mills, Printing works.
87.	Seithur	...	Rice and Oil mills.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

88.	Hosur	...	Stands, Electric tools. Iron and steel industry. Taluk and Revenue division headquarters.
89.	Karamadai	...	Rice mills.
90.	Manapparai	...	Textile mills.
91.	Watrap	...	Rice and Flour mills.
92.	Kombai	...	
93.	Muthupet	...	Rice mills, Coconut groves, Minor port, Boat building.
94.	Denkanikota	...	Steel furniture, Agarbathies, Tiles.
95.	Tiruvaiyaru	...	Rice mills.
96.	Perambalur	...	Taluk headquarters.
97.	Thevaram	...	
98.	Anamalai	...	Rice and Oil mills.
99.	Chetput	...	Rice mills.
100.	Nazareth	...	
101.	Devarshola	...	Plantations.
102.	Pallikonda	...	
103.	Vattalakundu	...	Rice mills.
104.	Tiruttani	...	Handloom textiles, Rice and Oil mills, Chemical products (Pharmaceuticals) Pilgrim centre. Taluk headquarters.
105.	Neyveli Lignite Corporation	...	Lignite, Nitrogenous fertilizer, H. T. L. T. Insulators.
106.	Arantangi	...	Rice mills. Taluk headquarters.
107.	Tiruppuvanam	...	
108.	Valavanur	...	Oil mills.
109.	Nelliyalam	...	Plantations.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

110.	Elumalai	...	
111.	Kamudi	...	Rice Mills, Ginning factory.
112.	Sulur	...	Cotton ginning mills, Rice, Oil and Flour mills, Druggets.
113.	Palladam	...	Reclaimed rubber, Rice mills, Cotton ginning mills.
114.	Avanashi	...	Rice, Oil and Cotton ginning mills.
115.	Naduvattam	...	Plantations, Quinine factory.
116.	Papanasam	...	Writing and printing paper pulp, Rice mills. Taluk headquarters.
117.	Thottiam	...	
118.	Kaveripatnam	...	Grapes.
119.	Kalambur	...	Rice mills.
120.	Tiruvadamarudhur	...	
121.	Harur	...	Taluk headquarters.
122.	Ponnamaravati	...	
123.	Darapadavedu	...	Wooden furniture (Katpadi)
124.	Annur	...	Cotton ginning, Rice and Oil mills.
125.	Aduthurai	...	Cotton handloom textiles, Rice mills.
126.	Kuttalam	...	Rice and Oil mills.
127.	Gudalur	...	Plantations.
128.	Vallam	...	Agricultural implements, Glass.
129.	Kodavasal	...	Rice and Oil mills.
130.	Tirukattupalli	...	Rice and Oil mills.
131.	Nannilam	...	Rice mills. Taluk headquarters.
132.	Ponneri	...	Rice and Flour mills. Taluk headquarters.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

133.	Nilakkottai	...	Taluk headquarters.
134.	Kattuputhur	...	
135.	Srimushnam	...	Rice mills.
136.	Tirumalaivasal	...	
137.	Pennadam	...	Sugar and molasses.
138.	Orathanad	...	Rice mills. Taluk headquarters.
139.	Jagathala	...	Plantations.
140.	Sriperumbudur	...	Textile machinery and accessories. Taluk headquarters.
141.	Ulundurpet	...	Rice and Oil mills.
142.	Valangiman	...	Rice mills.
143.	Thallakulam	...	
144.	Bhavani (Thottipalayam)	...	Carpets.
145.	Rameswaram	...	Pilgrim centre
146.	Alwartirunagari	...	
147.	Torappadi	...	
148.	Ponmeni	...	
149.	Abiramam	...	Rice mills, Tile works.
150.	Cheyyur	...	
151.	Tondi	...	Port.
152.	Mandapam	...	Marine Fisheries Research station.
153.	Peraiyur	...	Rice mills.
154.	Nanguneri	...	Taluk headquarters.
155.	Kottaiyur	...	

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

156.	Palayampatti	...	
157.	Kandanur	...	
158.	Pallathur	...	Brass vessels factory.
159.	Aravakurichi	...	
160.	Thondamuthur	...	
161.	Alangudi	...	Rice mills.
162.	Konakkarai	...	Plantations.
163.	Arimalam	...	Weaving industries.
164.	Vaitheeswarankoil	...	Rice and Oil mills.
165.	Kiranur	...	Rice and Oil mills.
166.	Kanadukathan	...	
167.	Needamangalam	...	
168.	Karivalamvandanallur	...	Rice, Oil and Cotton ginning mills.
169.	Nattarasankottai	...	
170.	Puduvayal	...	Rice mill.
171.	Pulicat	...	Basket weaving.
172.	Vilathikulam	...	Rice and Oil mills, Cotton textiles.
173.	Ramachandrapuram	...	
174.	Nambuthalai	...	
175.	Masinagudi	...	Plantations.
176.	Devasthanam	...	Tannery, Bidi making.
177.	Pillamangalam (Alagapuri)	...	Brass vessels manufacture.
178.	Bhavanisagar	...	Straw board and other industries, Electric posts, Shutters and Girders for dams.

TABLE V - 15 (Contd.)

Classification of towns according to predominant characteristics

179.	Tirumayam	...	Metal works. Taluk headquarters.
180.	Vadakkupoyyur	...	
181.	Kilasevalpatti	...	
182.	Koyambedu	...	
183.	Meenambakkam	...	Steel structurals, Forging of cycle crank and forging for automobile industry, Optical industry.
184.	Sathamangalam	...	
185.	Selaiyur	...	
186.	Courtallam	...	Tourist Centre.
187.	Eranavur	...	

TABLE V - 16

Predominant characteristics of constituents of town-groups—1961

District	Name of Town-group	Predominant characteristics of constituents (names of town under each appropriate constituent)					
		Port	Trade & Commercial	Industrial & Manufacturing	Transport, Storage & Communication	Administrative	Residential Educational
1	2	3	4	5	6	7	8
2. Chingleput	1. Tiruvattiyur (T.G.)	...	...	Tiruvattiyur (M)	...	...	Eranavur (N.P.)
	2. Nekkundram (T.G.)	...	...	Nekkundram (P)	...	...	Koyambedu (P)
	3. Mount Alandur (T.G.)	...	...	...	...	...	St. Thomas Mount-cum-Pallavaram (Cantt.)
		...	...	...	...	...	Alandur (P)
		...	...	Issa Pallavaram (P)	...	...	Meenambakkam (P)
		...	..	Tirusoolam (P)	...	...	...
		...	...	Palavanthangal (P)	...	...	...
		...	...	Pallavaram (P)	...	...	...
	4. Tambaram (T.G.)	...	..	...	...	...	Selaiyur (P)
		...	...	...	...	...	Tambaram (P)
3. North Arcot	5. Ranipet (T.G.)	...	...	Ranipet (M)	...	...	...
		...	...	Arcot (M)	...	...	...
	6. Vaniyambadi (T.G.)	...	...	Jaffarabad (P)	...	...	Devasthanam (P)
		...	...	Vaniyambadi (M)	...	...	...
	7. Vellore (T.G.)	...	...	Konavattam (P)	...	Vellore (M)	...

TABLE V-16 (Contd.)

Predominant characteristics of constituents of town-groups—1961

District	Name of Town-group	Predominant characteristics of constituents (names of town under each appropriate constituent)					
		Port	Trade & Commercial	Industrial & Manufacturing	Transport, Storage & Communication	Admini-strative	Residential Educational
1	2	3	4	5	6	7	8
3. North Arcot (Contd.)							
		...	...	Sathuvacheri (P)	...	...	...
6. Coimbatore	8. Bhavani (T.G.)	...	...	Bhavani (P)	...	...	Bhavani (Thotti-palayam) (P)
	9. Kurichi (T.G.)	...	...	Singanallur (P)	...	...	...
		...	...	Uppilipalayam (P)	...	...	...
		...	...	Kaniamuthur (P)	...	...	...
		...	...	Kurichi (P)	...	...	...
		...	...	Vellalur (P)	...	...	...
		...	...	Madukkarai (N.P.)	...	...	...
	10. Anamalai (T.G.)	...	...	...	...	...	Anamalai (P)
		...	...	...	...	...	Vettaikaranpudur (P)
7. Nilgiri	11. Nelliyalam (T.G.)	...	...	...	...	...	Devershola (P)
		..	...	...	...	...	Nelliyalam (P)
	12. Naduvattam (T.G.)	...	...	...	...	...	Masinagudi (P)
		...	...	...	...	..	Naduvattam (P)
	13. Kotagiri (T.G.)	...	...	..	...	...	Konakkarai (P)

TABLE V - 16 (Contd.)

Predominant characteristics of constituents of town-groups – 1961

District	Name of Town-group	Port	Trade & Commercial	Industrial & Manufacturing	Transport, Storage & Communication	Administrative	Residential Educational
		Predominant characteristics of constituents (names of town under each appropriate constituent)					
1	2	3	4	5	6	7	8
7. Nilgiri (Contd.)		...	...	...	...	...	Kotagiri (P)
	14. Coonoor (T G.)	...	...	Cordite Factory in Aravankadu (N.P.)	...	...	Jagathala (P)
		...	...	...	...	...	Coonoor (M)
		...	...	...	...	...	Wellington (Cantt.)
8. Madurai	15. Palni (T.G.)	..	...	...	...	...	Palni (M)
		..	...	...	...	...	Ayakudi (P)
	16. Uttamapalayam (T.G.)	...	...	...	...	...	Uttamapalayam (P)
		...	...	...	...	...	Kombai (P)
	17. Thallakulam (T.G.)	...	...	...	...	...	Thallakulam (P)
		...	...	...	...	...	Sathamangalam (P)
	18. Tirupparankunram (T.G.)	...	...	Madakulam (P)	...	..	Ponmeni (P)
		...	...	Avaniapuram (P)	...	...	...
		...	...	Tirupparankunram (P)	...	...	...
9. Tiruchirapalli	19. Lalgudi (T.G.)	...	...	Puvalur (P)	...	...	Lalgudi (P)
	20. Golden Rock (T.G.)	...	...	Golden Rock Railway Colony & Panchayat (Ponmalaipatti)	Abisheka-puram (N.P.)	...	...

TABLE V - 16 (Contd.)

Predominant characteristics of constituents of town-groups—1961

District	Name of Town-group	Predominant characteristics of constituents (names of town under each appropriate constituent): Port	Trade & Commercial	Industrial & Manufacturing	Transport, Storage & Communication	Administrative	Residential Educational
1	2	3	4	5	6	7	8
10. Thanjavur	21. Kumbakonam (T.G.)	...	...	Darasuram (P)	...	...	...
		...	...	Kumbakonam (M)	...	...	...
	22. Nagapattinam (T.G.)	Naga-pattinam (M)	...	...	...	...	Vadakkupoyyur (P)
11. Ramanatha-puram	23. Kottaiyur (T.G.)	...	...	...	...	...	Pallathur (P)
		...	...	...	...	...	Kottaiyur (P)
	24. Tondi (T.G.)	...	...	...	...	...	Tondi (P)
		...	...	...	...	...	Nambuthalai (P)
	25. Paramakudi (T.G.)	...	...	Paramakudi (P)	...	...	...
		...	...	Emaneswaram (P)	...	...	...
	26. Aruppukkottai (T.G.)	...	...	Aruppukkottai (M)	...	...	Palayampatti (P)
	27. Seithur (T.G.)	...	...	Chettiyarpatti (P)	...	...	Seithur (P)
12. Tirunelveli	28. Tuticorin (T.G.)	Tuticorin (M)	...	Milavittan (P)	...	...	...
	29. Palayamcottai (T.G.)	...	...	Tachchanallur (P)	...	...	Palayamcottai (M)

TABLE V - 16 (Contd.)

Predominant characteristics of constituents of town-groups—1961

District	Name of Town-group	Port	Trade & Commercial	Industrial & Manufacturing	Transport, Storage & Communication	Administrative	Residential Educational
		Predominant characteristics of constituents (names of town under each appropriate constituent)					
1	2	3	4	5	6	7	8
12. Tirunelveli (Contd.)		...	...	Tirunelveli (M)	...	...	...
		...	...	Melapalayam (M)	...	...	...
	30. Kallidaikurichi (T.G.)	...	...	Ambasamudram (P)	...	...	...
		...	...	Vikramasingapuram (P)	...	...	...
		...	...	Kallidaikurichi (P)	...	...	...
	31. Cheranmahadevi (T.G.)	.	...	Cheranmahadevi (P)	...	...	...
		...	.	Pattamadai (P)	...	...	...
	32. Kayalpattinam (T.G.)	...	...	Arumuganeri (P)	...	...	Kayalpattinam (P)
	33. Tiruchendur (T.G.)	...	..	Paramankurichi (P)	...	...	Tiruchendur (P)
	34. Udangudi (T.G.)	...	..	Udangudi (P)	...	...	...
		...	..	Kulasekarapattinam (P)	...	...	...

Characteristics of small towns and villages

23. To understand and compare the characteristics of similar towns and villages, I have selected one town in Mannargudi taluk of Thanjavur district. Needamangalam is a Class VI town. It is situated in the north-eastern corner of the taluk. I have selected two other villages, Kovilvenni located in the north-western portion of the taluk and Parappanamedu situated south of Needamangalam. Needamangalam and Kovilvenni are panchayats and Parappanamedu is a village. The population of the three units as per the 1961 Census are given below:

Needamangalam	...	4,896
Kovilvenni	...	2,248
Parappanamedu	...	865

Needamangalam was classified as a town in 1951 Census. A perusal of the Notional Map will show that Needamangalam has well formed streets and roads running from north to south in most cases and west to east in certain cases. It should not be thought that the town has been planned by anyone. It represents a natural growth. The town has a cinema theatre situated in the south-western part. The river Korayar forms its natural boundary on the west. Housing settlements have grown up on the eastern side of the river. Needamangalam has been divided into three localities for house numbering. Locality I has 36 streets. It is situated on the western side. Locality II consists of 9 streets and is situated on the eastern side. Locality III has only one street and is situated on the northern portion. It represents the best developed area. The bus stand, taluk office and railway station are found in this locality. The bus stand is located near the railway station. Locality III is known as Papaiyanthopu, Locality II as Palayaneedamangalam and Locality I as Needamangalam. The names of streets like Kosa Theru, Vellalar Street, Sarvamanya Agraharam and Pallivasal Street in Locality I are suggestive of localities of workers of particular castes and religion.

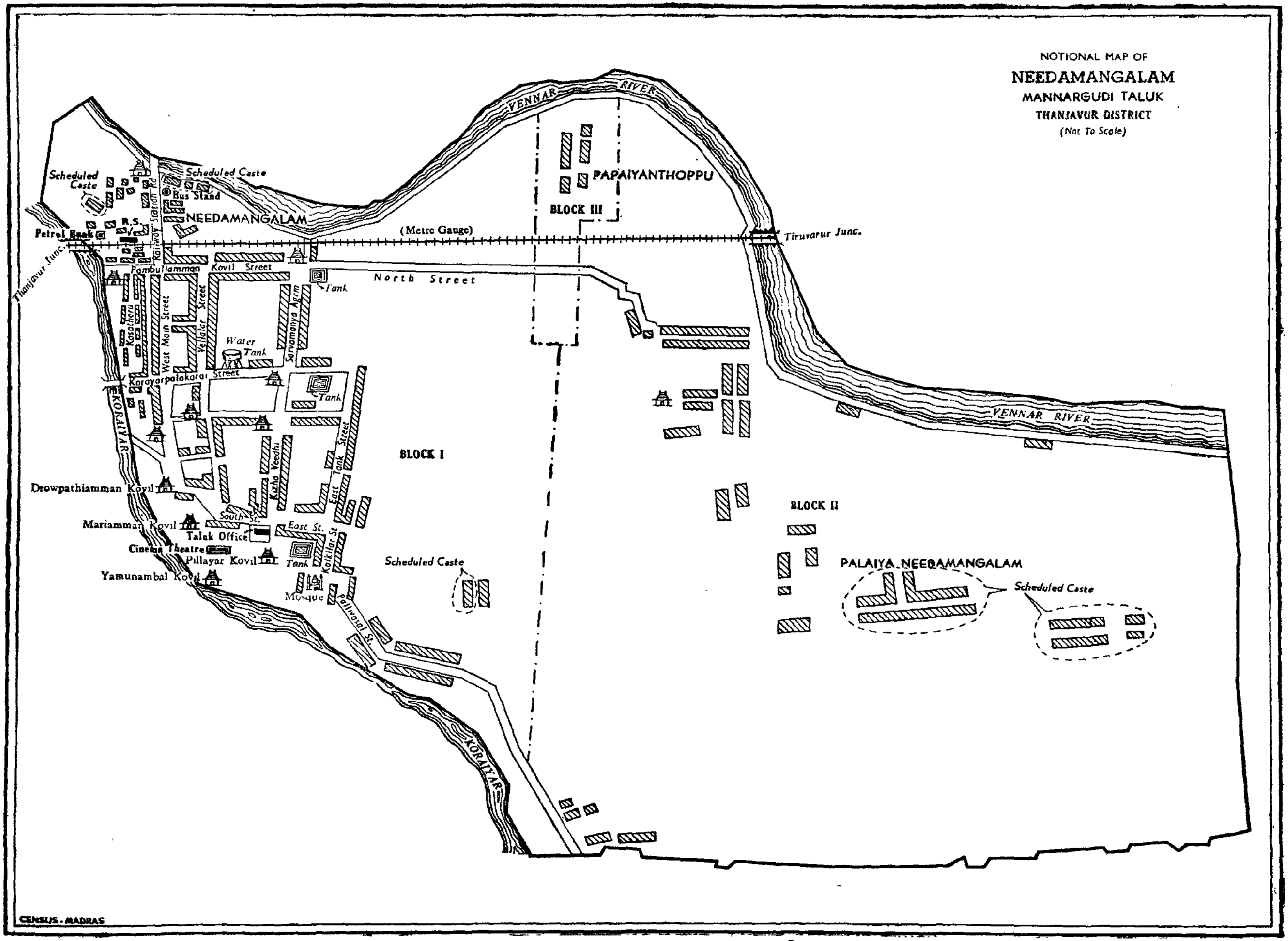
There is no separation of areas or streets in this town as centres of public administration or business except for the fact that the Taluk Office is located in this town. Places of worship are found scattered over the entire area. Streets are formed adjoining places of worship and houses have been built. Places of worship are situated either at the beginning of the streets or at the end and are not found between house sites.

The houses of Scheduled Castes people are located at corners away from other classes of people. The practice of the past that Scheduled Castes live in segregated areas is continuing even today. In both the localities I and II, the houses of Scheduled Castes are situated in secluded areas at a distance from these of other habitants.

Coming to Parappanamedu village, even though many streets are named, they are not formed in an orderly manner as in Needamangalam town. The formation of streets is neither linear nor horizontal. They lie in a zig-zag manner. Most of the streets run east to west. Some are perpendicular to them. Though the block system of house numbering has been adopted, its streets and roads have not been well formed. Nearly half the population belong to Scheduled Castes. They live in secluded areas away from other caste Hindus and live in a scattered manner. No areas are found which can be treated as centres of business or administration.

In Kovilvenni also the block system of house numbering is found. Well formed roads, streets or lanes do not exist in this village. The growth of houses has also not been uniform. They lie scattered and do not run in straight lines. This will be evident from the houses marked in Block Nos. II and IV. As in the case of Needamangalam and Parappanamedu, Scheduled Castes live away from other classes. Their houses are situated in the eastern end of Block I and Block III. The Panchayat Board Office and dispensary are located in Block II while the school is located in Block IV. No clear demarcation of centres of business or administration can be found.

To sum up, the formation of streets, roads and construction of houses is more of order in Needamangalam town. Some similarity is observed in the habitation of Scheduled Castes. They not only live in well defined areas away from other caste people, but they have also their separate streets. This seclusion has not been destroyed by the fact that Needamangalam has been classified as an urban area. No distinct area can be found which can be ear-marked as centres of business or


NOTIONAL MAP OF
NEEDAMANGALAM
MANNARGUDI TALUK
THANJAVUR DISTRICT
(Not To Scale)
VENNAR RIVER
PAPAIYANTHOPPU
BLOCK III
(Metre Gauge)
Tiruvarur Junc.
Thanjavur Junc.
Petrol Bank
R.S.
Scheduled Caste
Bus Stand
NEEDAMANGALAM
Railway Station Rd
Pambulamman Kovil Street
North Street
Tank
West Main Street
Vellalar Street
Kosatheru
Water Tank
Saravamanya Agra
Korayarpalakarai Street
KORAIYAR
BLOCK I
Kazha Veedhi
East Tank Street
South St.
East St.
Koikilar St.
Pallivasal St.
Mosque
Drowpathiamman Kovil
Mariamman Kovil
Talук Office
Cinema Theatre
Pillayar Kovil
Yamunambal Kovil
BLOCK II
PALAIYA NEEDAMANGALAM
CENSUS. MADRAS

administration in each of these three units. As such, our conclusion is that there is no large variation between the Class VI town and the villages from which they develop.

Pareto Law

24. The Registrar General, India has made some experiment on the applicability of the Pareto Law to the size distribution of cities and towns according to their six size classes. He has found that the number of cities and towns in each class of several distinct regions enjoy similarity of development within themselves and even for several individual States stand in a very distinct and coherent relationship to each other and when cast in the form of a Pareto equation respond to a figure of an inclined straight line.

The Pareto Law states that if cumulative distribution of income is plotted on a double logarithmic scale, the points lie approximately on a straight line. This Law takes the following equation:

$\log Y = a + b \log X$ which is derived from

(1) $\Sigma \log Y = na + b \Sigma \log X$

(2) $\Sigma (\log X)(\log Y) = a \Sigma \log X + b \Sigma (\log X)^2$

For income, the town values are substituted.

Taking the 1961 and 1951 urban population, the following equations can be obtained:

$1961 = Y = 7.85 - 1.37 \log X$

$1951 = Y = 7.8773 - 1.40 \log X$

The above equations indicate that the slope of the Pareto line in 1961 is slightly less than the slope of the line in 1951. This slope can be interpreted as a measure of the degree of urbanisation. More steep the line is, the more even is the distribution of population in the corresponding towns. Migration of people from lower classes of towns to upper classes and *vice versa* may have a direct influence to cancel out the even distribution of population in towns provided no external factors like industrialisation come in to play. The impact of industrialisation may also retard the uneven distribution of population in towns.

The lesser slope in 1961 indicates a slight slackening of urbanisation in 1961 compared with 1951. In working out this formula, we have included towns of more than 10,000 population. 98 towns thus stand excluded. The reason for this, is that, the formula breaks down when it is applied to all the towns in the State.

The utility of this analysis is thus limited to the study of selected urban areas. If the towns with a population of less than 10,000 are also taken into account, the following equations are obtained:

$1961 = 5.37 - 0.83 \log X$

$1951 = 5.42 - 0.87 \log X$

Though the equations fit in a straight line, they cannot be applied because the values derived from the equations are significantly different from the observed values, that is, the number of towns in each class range of population is different from the expected values as calculated from the equation. Thus the application of Chi-square test to verify the validity of the Pareto Law reveals that it cannot be operative if towns of less than 10,000 population are included.

Distribution of urban population among the six classes of towns

25. The distribution of one thousand urban population of districts among the six class ranges of cities and towns are presented in these separate Tables for the period 1901 to 1961. In this discussion, town-groups have not been taken into consideration.

TABLE V - 17

Number per 1,000 of total urban population of each district in each Census year found in Class I towns, 1901–1961

(Districts which have no Class I towns are omitted)

State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	***378***	***355***	***293***	***269***	***244***	***258***	***276***
Madras City	1,000	1,000	1,000	1,000	1,000	1,000	1,000
North Arcot	180	201	...	...	...	...	...
Salem	404	429	419	524	...	...	...
Coimbatore	277	312	324	...	...	...	...
Madurai	418	449	415	411	455	511	483
Tiruchirapalli	368	375	367	421	470	522	555
Thanjavur	168	174	...	...	...	...	...
Tirunelveli	147	...	...	...	...	...	...
Kanyakumari	708	...	...	...	...	...	...

TABLE V - 18

Number per 1,000 of total urban population of each district in each Census year found in Class II towns, 1901–1961

(Districts which have no Class II towns are omitted)

State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	**142**	**109**	**124**	**136**	**148**	**113**	**129**
Chingleput	203	250	307	314	331	315	...
North Arcot	80	...	173	170	177	...	...
South Arcot	202	211	224	247	258	294	337
Salem	...	...	...	...	368	440	485
Coimbatore	279	173	...	361	343	...	408
Nilgiri	279	...	...	...	...	...	...
Madurai	92	97	98	...	...	...	...
Tiruchirapalli	149	...	...	...	...	...	...
Thanjavur	307	259	443	326	460	500	495
Ramanathapuram	294	113	...	...	...	...	...
Tirunelveli	164	214	227	309	118	...	...
Kanyakumari	...	367	423	...	...	...	...

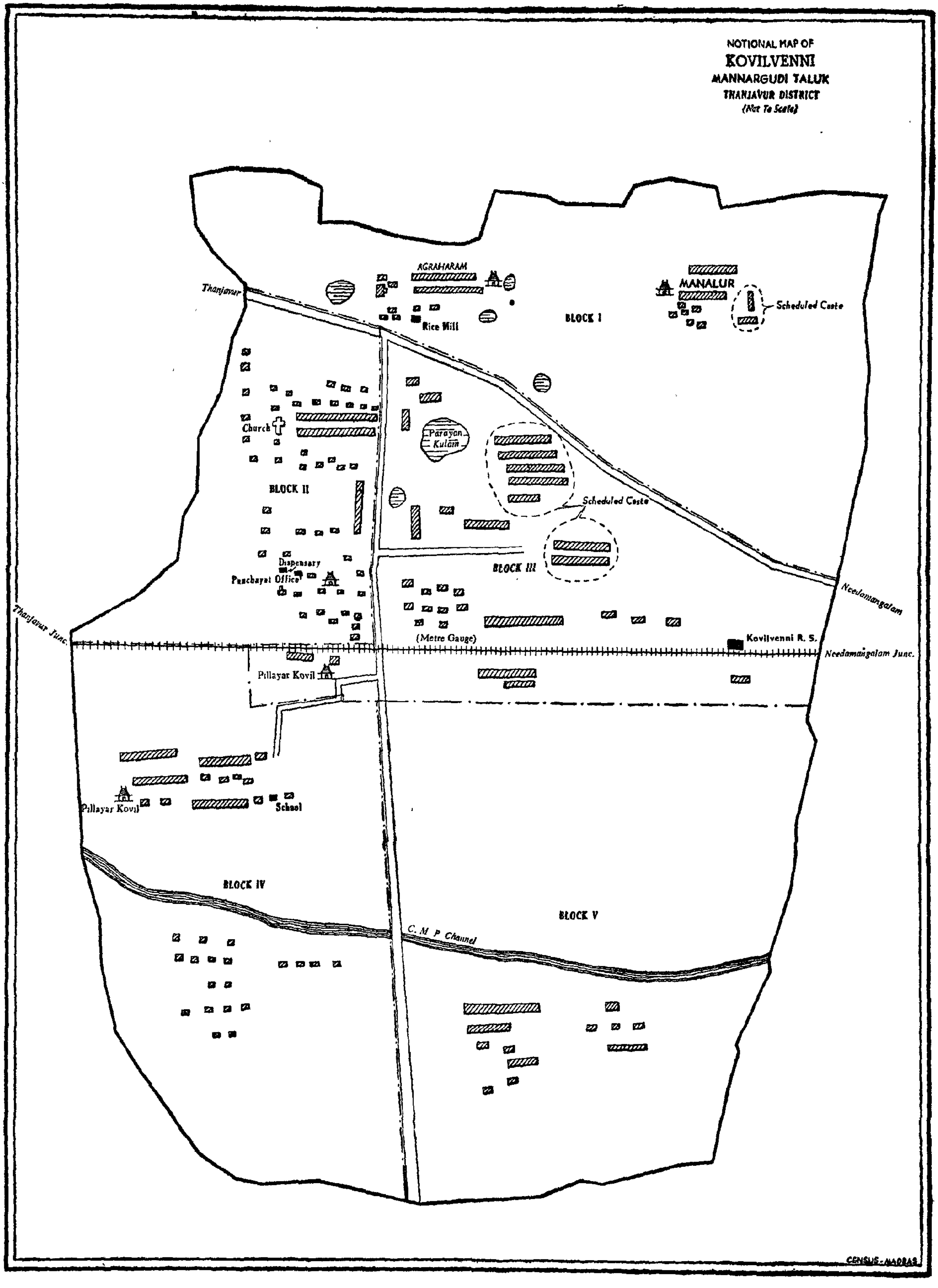

NOTIONAL MAP OF
KOVILVENNI
MANNARGUDI TALUK
THANJAVUR DISTRICT
(Not To Scale)
AGRAHARAM
MANALUR
Scheduled Caste
Thanjavur
Rice Mill
BLOCK I
Church
Parayan Kulam
BLOCK II
Scheduled Caste
Dispensary
Panchayat Office
BLOCK III
Needamangalam
Thanjavur Junc.
(Metre Gauge)
Kovilvenni R. S.
Needamangalam Junc.
Pillayar Kovil
Pillayar Kovil
School
BLOCK IV
BLOCK V
C. M. P. Channel
CENSUS - MADRAS

TABLE V - 19

Number per 1,000 of total urban population of each district in each Census year found in Class III towns, 1901–1961

(Districts which have no Class III towns are omitted)

State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	**208**	**234**	**186**	**192**	**161**	**204**	**177**
Chingleput	262	193	...	98	...	...	293
North Arcot	426	494	368	296	228	477	376
South Arcot	359	369	185	189	115	111	...
Salem	329	256	...	...	...	...	...
Coimbatore	210	264	294	212	120	281	...
Nilgiri	170	733	440	454	...	...	...
Madurai	220	160	176	212	168	173	216
Tiruchirapalli	125	212	203	157	192	218	230
Thanjavur	134	174	183	311	196	131	127
Ramanathapuram	332	499	453	458	350	352	308
Tirunelveli	352	362	230	132	248	391	368
Kanyakumari	...	...	...	428	443	1,000	1,000

TABLE V - 20

Number per 1,000 of total urban population of each district in each Census year found in Class IV towns, 1901–1961

(Districts which have no Class IV towns are omitted)

State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	**181**	**186**	**227**	**222**	**263**	**263**	**286**
Chingleput	365	370	365	280	295	329	430
North Arcot	221	261	311	322	287	167	489
South Arcot	360	273	328	308	427	507	546
Salem	137	174	412	397	454	276	244
Coimbatore	163	197	224	338	387	508	410
Nilgiri	345	267	436	264	823	541	686
Madurai	228	242	184	210	237	169	252
Tiruchirapalli	203	191	175	171	189	130	136
Thanjavur	190	220	171	215	158	212	183
Ramanathapuram	219	199	313	209	354	426	454
Tirunelveli	228	251	337	344	459	465	492
Kanyakumari	292	175	191	103	...	...	...

TABLE V - 21

Number per 1,000 of total urban population of each district in each Census year found in Class V towns, 1901–1961

(Districts which have no Class V towns are omitted)

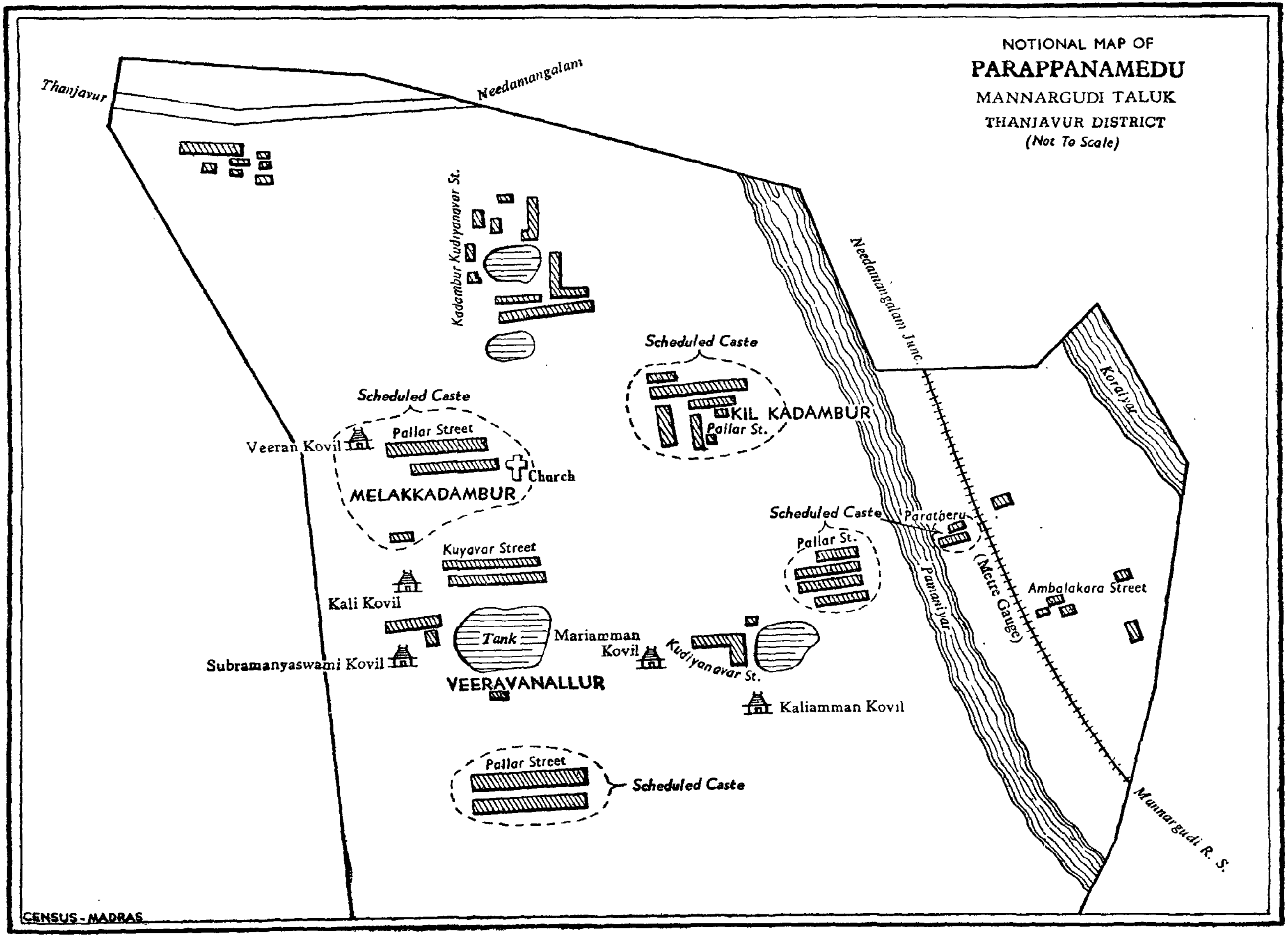
State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	**79**	**102**	**159**	**169**	**165**	**153**	**130**
Chingleput	119	176	295	288	326	302	277
North Arcot	80	44	148	212	308	356	135
South Arcot	79	147	263	256	154	88	117
Salem	130	141	154	79	153	249	271
Coimbatore	64	54	158	89	150	184	182
Nilgiri	169	...	124	282	177	459	314
Madurai	41	40	127	167	110	136	40
Tiruchirapalli	128	193	214	216	149	130	79
Thanjavur	184	157	194	136	161	150	195
Ramanathapuram	122	171	218	315	296	222	218
Tirunelveli	92	135	194	206	165	133	140
Kanyakumari	...	360	298	287	292	...	...

TABLE V - 22

Number per 1,000 of total urban population of each district in each Census year found in Class VI towns, 1901–1961

(Districts which have no Class VI towns are omitted)

State & District	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
Madras State	**12**	**14**	**11**	**12**	**19**	**9**	**2**
Chingleput	51	11	33	20	48	54	...
North Arcot	13	...	...	...	...	...	...
South Arcot	...	...	...	...	46	...	...
Salem	...	...	15	...	25	35	...
Coimbatore	7	...	...	...	...	27	...
Nilgiri	37	...	...	...	...	...	...
Madurai	1	12	...	...	30	11	9
Tiruchirapalli	27	29	41	35	...	...	...
Thanjavur	17	16	9	12	25	7	...
Ramanathapuram	33	18	16	18	...	...	20
Tirunelveli	17	38	12	9	10	11	...
Kanyakumari	...	98	88	182	265	...	...


NOTIONAL MAP OF
PARAPPANAMEDU
MANNARGUDI TALUK
THANJAVUR DISTRICT
(Not To Scale)
Thanjavur
Needamangalam
Kadambur Kudiyanavar St.
Needamangalam Junc.
Koraiyar
Scheduled Caste
KIL KADAMBUR
Pallar St.
Scheduled Caste
Pallar Street
Veeran Kovil
Church
MELAKKADAMBUR
Scheduled Caste
Paratheru
Pallar St.
Kuyavar Street
(Metre Gauge)
Pamaniyar
Ambalakara Street
Kali Kovil
Tank
Mariamman Kovil
Kudiyanavar St.
Subramanyaswami Kovil
VEERAVANALLUR
Kaliamman Kovil
Pallar Street
Scheduled Caste
Mannargudi R. S.
CENSUS - MADRAS

Madras had three Class I towns (cities) in 1901-Madras city, Madurai and Tiruchirapalli. Salem became the fourth city in 1931. In 1941, Coimbatore became a Class I town. In 1951 Vellore and Thanjavur became Class I towns making the number seven. Two more towns were added in 1961 in the districts of Tirunelveli and Kanyakumari. The trend has been, therefore, for the Class I towns to increase in numbers and population. The urban component of 276 was contributed in 1901 by three Class I towns, but it tended to show a depression till 1941 inspite of the inclusion of Salem as a Class I town in 1931. 1941-51 witnessed an increase in the proportion from 293 to 355, about 20%. This was to some extent due not only to the inclusion of new towns in 1951 like Vellore and Thanjavur in Class I group, but also due to the abnormal population growth in the cities of Madras State.

The increase recorded in 1951-61 is slightly less than that of 1941-51 and this has been facilitated by the addition of two new Class I towns in Tirunelveli and Kanyakumari. Still the tendency of the population to move towards Class I towns has increased and Class I towns contribute 378 out of one thousand urban population. Nagercoil accounts for 708 out of one thousand urban population of Kanyakumari district. This is the highest figure recorded by Class I towns excluding Madras which is entirely urban. Tirunelveli has contributed the lowest—147. In the era 1951-61, the contribution of Class I towns has shown a downward trend in all districts except Tirunelveli and Kanyakumari which have added a town each.

The contribution of Class II towns has shown considerable fluctuation during 1901-1961. It showed a depression in 1911, recorded a rise in 1921, again followed a downward trend till 1951, and has reached the figure of 142 in 1961. Thanjavur has the highest figure under Class II towns. The lowest is recorded by North Arcot. Whenever any district has large cities, the contribution under Class II is found to be the lowest. Class II towns of the State contribute only less than half of what Class I towns does—142 against 378.

The contribution of Class III towns is 208 per 1,000 urban population which is higher than that of Class II towns. This class has also been subject to fluctuations. Kanyakumari has no figure under this head. The higher figures are recorded by North Arcot, Salem, Ramanathapuram, Tirunelveli and South Arcot. Generally the figures under Class II and Class III are higher in districts where no Class I town is found.

A figure of 181 is recorded under Class IV towns. It had a high figure of 286 in 1901 which depressed appreciably by 1931. It has gained momentum in 1941 and has recorded an appreciable depression in 1951 and a small depression between 1951 and 1961. Again a high concentration of population in Class IV towns is found in Chingleput and South Arcot. The lowest proportion is recorded by Salem.

Class V towns has recorded an appreciable fall from 130 in 1901 to 79 in 1961. It recorded an increase till 1921, increased slightly in 1931, and decreased in 1941, but recorded appreciable falls during 1941-51 and 1951-61. The highest figure is recorded in Thanjavur—184. Figures of all districts except South Arcot, Coimbatore and Madurai are above the State average. The proportion of urban population in Class VI towns has increased from 2 to 12 during 1901-61. They are chiefly found in the districts of Chingleput, Nilgiri, Tiruchirapalli, Thanjavur, Ramanathapuram and Tirunelveli. The contribution of Chingleput, Nilgiri, Ramanathapuram and Tiruchirapalli is substantially higher than the State average.

Class III towns are found in the more industrially backward districts of North Arcot, Salem, Tirunelveli and Ramanathapuram. The general trend is for the population to increase in Class I and Class III categories. The fall in the number of persons living in Class VI towns during 1951-61 indicates that a definite pattern of towns is emerging in the State.

Concentration of urban population in certain population ranges

26. Table V-23 gives the distribution of population among towns with more than 20,000 in 1961. In working out this table, population of a town-group has been taken into account and not the population of the constituent towns.

TABLE V - 23

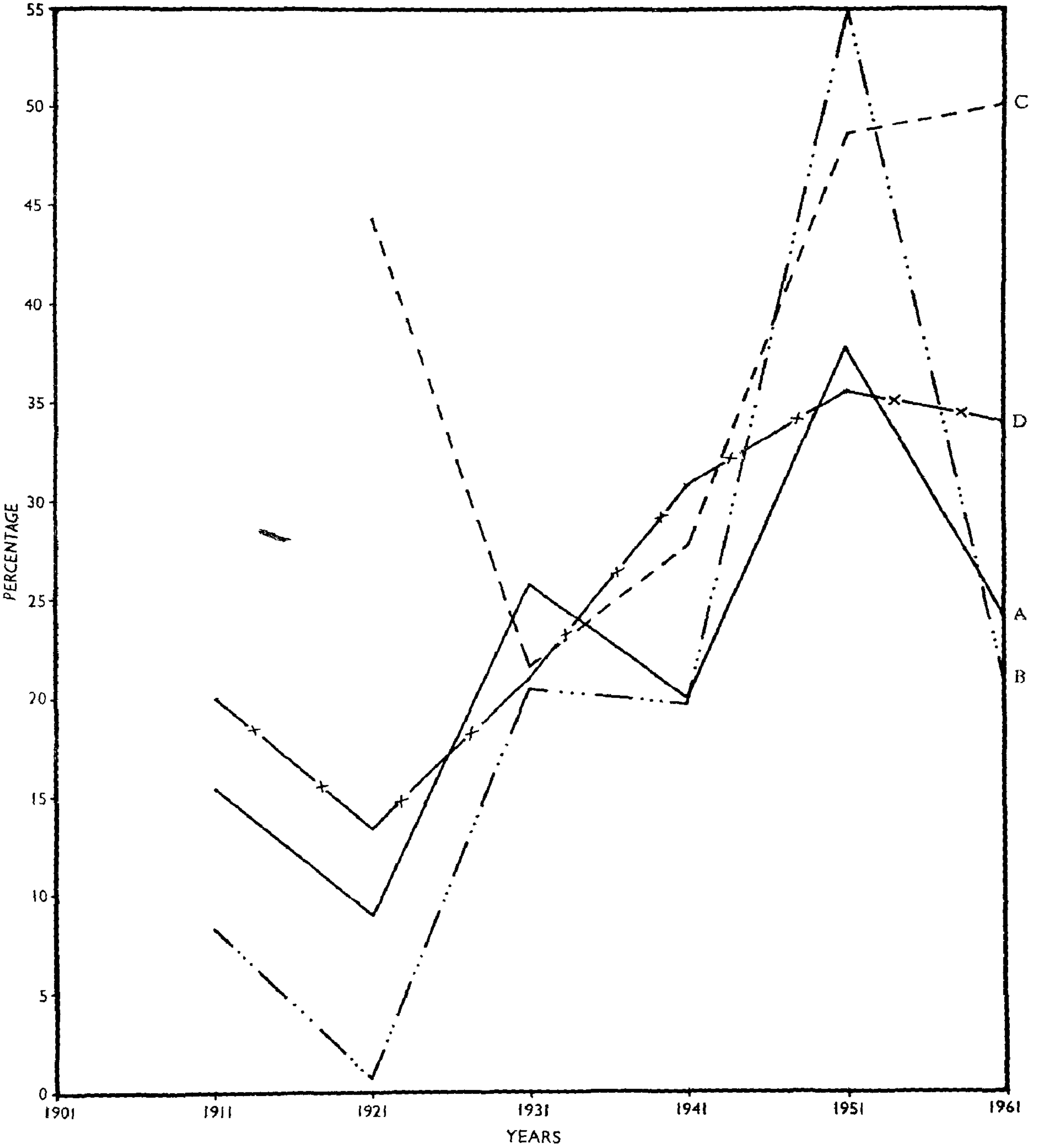
Distribution of population between towns and town-groups, district by district with population over 20,000 in 1961

State and *District*	Average population *per town/* town-group	No. in towns per 1,000 of General Population in District	Number per 1,000 of urban population in towns with a population of				
			100,000 & over	80,000 to 100,000	60,000 to 80,000	40,000 to 60,000	20,000 to 40,000
1	2	3	4	5	6	7	8
Madras State	**31,326**	**267**	**413**	**40**	**56**	**120**	**150**
Madras City	1,729,141	1,000	1,000	...	...	...	...
Chingleput	18,227	207	..	203	140	...	215
North Arcot	25,249	201	194	...	...	305	210
South Arcot	19,616	129	...	...	202	215	144
Salem	24,694	162	404	...	...	...	329
Coimbatore	38,228	290	393	78	149	53	183
Nilgiri	25,695	439	...	...	...	573	231
Madurai	39,067	316	418	92	...	157	162
Tiruchirapalli	21,873	213	368	...	...	280	30
Thanjavur	20,673	204	168	146	93	78	134
Ramanathapuram	19,983	248	...	...	119	336	230
Tirunelveli	24,938	311	374	...	89	49	259
Kanyakumari	37,520	151	708	...	...	...	...

The average population of a town in the Madras State is 31,326. With the exception of Ramanathapuram, Chingleput and South Arcot the average population of a town is higher than 20,000 in all the districts. The population range is interesting. 779 out of one thousand live in towns of 20,000 and more. Bulk of it, 413 are found in cities of one lakh and more. Among the others, the maximum concentration is seen in the range of 20,000 to 40,000. This tendency is more pronounced in districts of Chingleput North Arcot, Nilgiri, Ramanathapuram and Tirunelveli. 40,000 to 60,000 is the popular range in Nilgiri, North Arcot, South Arcot, Tiruchirapalli and Ramanathapuram. The districts of Salem, Coimbatore, Madurai, Tiruchirapalli, Tirunelveli, and Kanyakumari are completely dominated by the cities located in them. However, a very even distribution is found in Thanjavur and to some extent in Coimbatore.

From the above discussion, it will be clear that the maximum population is contributed by

Progress of Population in Cities and Towns Classified According to Character During 1901 - 1961



LEGEND

A Administrative, Residential and Educational Towns
B Port Trading and Commercial Town including ship building Towns
C Transport Storage and Communication Towns
D Manufacturing and Industrial Towns

Class I towns and then by towns having a population range of 20,000 to 40,000 and 40,000 to 60,000. The lowest contribution is made by the population range of 80,000 to one lakh.

Progress of population in cities and towns of certain characteristics

27. The table below presents the population in cities and towns classified according to their character during 1901 to 1961. The percentage decennial variation is shown in addition to absolute figures and indicates increases and decreases. These increases are plotted in a graph.

TABLE V - 24

Progress of population in cities and towns classified according to character during 1901–1961
(Percentage decennial variation is shown under absolute figures and indicates increases)

Class of Towns	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8
A. Administrative, Residential & Educational Towns (including Rice Mill and Oil Mill, Cotton ginning and agricultural produces processing towns)	4,445,135	3,579,475	2,597,751	2,165,518	1,716,361	1,574,794	1,364,261
	24.18	37.79	19.96	26.17	8.99	15.43	...
B. Port, Trading & Commercial Towns	2,039,694	1,685,683	1,087,510	908,478	753,458	747,652	689,699
(including ship building towns)	21.00	55.00	19.71	20.57	0.78	8.40	...
C. Transport, Storage & Communication	34,608	23,032	15,484	12,115	9,954	6,896	...
Towns	50.26	48.75	27.81	21.71	44.34	...	...
D. Manufacturing & Industrial Towns	2,471,091	1,842,781	1,358,810	1,038,407	857,729	753,461	627,859
	34.10	35.62	30.86	21.06	13.84	20.00	...
E. Mining Towns	...	...	...	...	...	...	...
F. Railway Towns	...	...	...	...	...	...	...

Two important categories of cities and towns in the State are 'Administrative, Residential and Educational' towns and 'Manufacturing and Industrial' towns. Administrative towns have recorded a steady expansion during the decade 1901 to 1961. But the population growth of Manufacturing and Industrial towns is much more, especially after 1931. In the current decade, the growth is 34.10%, in Manufacturing and Industrial towns as against 24.18% in Administrative, Residential and Educational towns. By a study of the growth, it can be seen that Administrative towns have reached a saturation point in 1951 and tended to fall. It is what is to be expected because the Residential and Educational towns have tended to lose their importance because of the defusion of educational institutions throughout the State.

Manufacturing and Industrial towns have recorded a steadily increasing percentage except for the decreases in the decades 1911-21 and 1951-61. Under 'Transport, Storage and

Communication' towns only a small percentage of population is found, i.e., 34,608. But the increase from the decade 1931 to 1961 has been steady. There is more scope for the development of 'Transport, Storage and Communication towns'. The last three decades have witnessed a fall in the population of 'Port, Trading and Commercial' centres. This State has depended upon trade with Far Eastern countries for its prosperity. Because of the ban imposed by Burma, Malaya and Ceylon on the entry of Indians, the trade with these countries has depressed with the result that towns like Nagapattinam have been adversely affected. The decade 1951-61 has also witnessed a fall in trade with foreign countries which has tended to decrease the prosperity of 'Port' towns.

Residential towns having less population in 1961 than in 1901

28. A few towns are found more of a residential cadre which has a lesser population in 1961 than in 1901. Their decrease is indicated in the Table below.

TABLE V - 25

Progress of residential towns which have less population in 1961 than in 1901

Name of district and town	Variation between 1901-61	Population in 1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Chingleput								
Pulicat	(—) 1,439	4,009	3,620	3,781	4,164	4,177	4,734	5,448
Poonamallee	(—) 3,423	11,900	20,677	18,704	20,340	17,549	16,342	15,323
Tiruchirapalli								
Udaiyarpalayam	(—) 29	7,524	7,276	7,920	7,377	7,817	6,759	7,553
Thanjavur								
Tiruvadamarudhur	(—) 2,043	9,194	14,240	11,683	12,759	11,511	12,549	11,237
Ramanathapuram								
Abiramam	(—) 703	6,635	10,594	10,521	9,594	8,265	8,087	7,338
Watrap	(—) 1,748	11,383	9,595	9,414	9,123	8,346	8,062	13,131
Seithur	(—) 2,643	11,685	10,515	15,348	8,199	11,754	14,208	14,328
Tirunelveli								
Tiruchendur	(—) 10,874	15,182	13,214	11,110	15,328	8,883	25,531	26,056
Kulasekarapattinam	(—) 19,219	10,679	10,029	11,900	11,114	12,691	21,812	19,898
Viravanallur	(—) 773	16,554	17,968	16,926	17,682	16,875	15,966	17,327
Cheranmahadevi	(—) 3,165	10,309	10,051	8,958	11,310	11,911	12,150	13,474
Nanguneri	(—) 643	5,937	9,516	9,024	9,547	9,842	8,496	6,580

They are generally residential towns located in different districts. One of them, Udaiyarpalayam of Tiruchirapalli district has almost the same population as in 1901. It has recorded practically no change during the last 60 years. As indicated earlier in the chapter, the question of declassifying this town was considered in 1961, but as it was the headquarters of a taluk and as it has enjoyed the status of a town for the last 60 years, it has been retained as a town.

Pulicat is located north of Madras. It is an old Dutch settlement. Its importance lay in that it is located on the Buckingham Canal which supplied rice to Madras State. Boats are not employed as it used to be earlier in the century for the transport of rice. Thus Pulicat has recorded a decrease in its population.

Poonamallee is a town lying on the outskirts of Madras City. It has recorded an appreciable fall in population from 1951-61. It used to supply flowers to the city. Growing of flowers has ceased to be a lucrative occupation and the persons have tended to take to other useful occupations.

Tiruvadamarudhur has a famous temple in Tanjavur district. It has recorded a fall in population because of the large scale migration of the Brahmin community in search of work to other parts of the State and India. One of the tendencies noticed in the course of this Census is that Brahmins as a rule tend to move away from their original residences in search of work. Thus, a number of towns and villages in the Madras State where Brahmins are found in large numbers have shown signs of this disintegration.

The other 8 towns are found in Ramanathapuram and Tirunelveli. These areas have witnessed large scale migration. Again Tiruchendur is famous for its temple. Cottage industries are practised in Cheranmahadevi, Nanguneri and Veeravanallur. These places have lost their importance in course of time because of the diversion of people to more lucrative work.

Non-industrial towns which declined in population at certain censuses

29. Table V-26 gives the list of non-industrial towns which declined in population at certain Censuses.

TABLE V-26

Non-industrial towns (Administrative, Residential, Port or Commercial) which declined in population at certain Censuses 1901-1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Coimbatore	Coimbatore	286,305	197,755	130,348	95,198	65,788	47,007	53,080
Tiruchirapalli	Tiruchirapalli	249,862	218,921	159,566	142,843	120,422	123,512	104,721
Salem	Salem	249,145	202,335	129,702	102,179	52,244	59,153	70,621
Thanjavur	Thanjavur	111,099	100,680	68,702	66,889	59,913	60,341	57,870
South Arcot	Cuddalore	79,168	69,084	60,632	59,057	50,527	56,574	52,216
Thanjavur	Nagapattinam	59,063	57,854	52,936	48,527	54,016	60,168	57,190
Tirunelveli	Palayamcottai	51,002	40,010	30,967	51,990	46,643	44,909	39,545
Tiruchirapalli	Pudukottai	50,488	44,527	34,188	28,776	26,101	26,850	20,347
Madurai	Bodinayakanur	44,914	35,912	28,435	27,036	20,341	20,183	22,209

TABLE V - 26 (Contd.)

Non-industrial towns (Administrative, Residential, Port or Commercial) which declined in population at certain Censuses 1901-1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Tiruchirapalli	Srirangam	41,949	36,702	26,676	24,663	23,153	24,799	23,039
Madurai	Palni	39,832	34,486	24,706	18,899	17,501	13,211	17,168
North Arcot	Ambur	39,455	39,992	31,700	24,217	19,220	18,264	15,903
Madurai	Periyakulam	36,335	31,000	25,882	23,004	16,478	18,715	17,960
South Arcot	Tindivanam	34,342	29,651	18,177	18,856	15,177	13,804	11,373
North Arcot	Tiruppattur	30,799	27,003	23,008	18,299	16,275	10,470	18,689
Thanjavur	Tiruvarur	30,137	27,251	22,275	20,371	24,124	16,408	15,436
Salem	Attur	29,018	22,844	15,656	11,697	12,499	10,992	9,673
	Dharmapuri	28,031	24,094	19,105	14,815	14,393	6,458	8,102
Coimbatore	Gopichettipalayam	27,004	30,354	16,140	16,304	14,102	10,163	10,227
Ramanathapuram	Ramanathapuram	26,890	24,053	18,152	16,817	15,281	16,513	14,546
Coimbatore	Dharapuram	26,490	24,163	20,660	18,218	16,124	17,926	17,178
Ramanathapuram	Devakottai	25,524	25,989	24,315	20,393	16,143	13,329	9,503
Madurai	Gudalur	24,635	19,915	17,398	17,612	...	...	...
Salem	Krishnagiri	23,827	19,774	15,311	12,850	6,947	10,887	10,446
	Namakkal	19,935	16,830	12,515	9,306	9,293	5,196	6,843
Coimbatore	Kottur	19,862	14,435	11,051	9,555	7,108	18,801	...
Thanjavur	Sirkali	19,531	15,275	12,804	12,814	12,360	11,116	9,722
South Arcot	Panruti	18,754	14,584	16,429	13,952	15,293	15,864	15,206
Thanjavur	Vedaranyam	18,033	16,945	14,508	15,036	14,475	14,632	14,138
Madurai	Ayakudi	17,077	14,706	15,903	...	...	...	...
Ramanathapuram	Kilakarai	16,860	16,188	14,306	6,576	6,034	15,145	11,078

TABLE V - 26 (Contd.)

Non-industrial towns (Administrative, Residential, Port or Commercial) which declined in population at certain Censuses 1901-1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Tiruchirapalli	Turaiyur	15,939	14,488	15,713	13,801	13,546	13,249	12,807
Chingleput	St. Thomas Mount cum-Pallavaram	15,790	15,125	9,317	9,293	14,872	15,604	15,571
Salem	Sendamangalam	15,320	15,407	13,674	11,254	12,972	9,196	13,584
South Arcot	Porto Novo	15,139	15,084	14,175	13,762	12,940	15,804	13,712
Madurai	Melur	14,829	14,073	9,592	8,116	4,774	9,972	10,100
North Arcot	Polur	14,764	16,088	13,164	11,626	9,903	9,929	9,206
Thanjavur	Tranquebar	14,754	15,016	11,111	12,796	11,520	13,268	13,142
Ramanathapuram	Tirupattur	14,510	15,532	12,911	10,644	9,687	9,399	5,881
	Ilayangudi	14,433	14,741	12,291	12,209	11,147	10,683	...
South Arcot	Vriddhachalam	14,350	11,362	8,876	9,016	6,540	11,779	9,433
Madurai	Sholavandan	14,114	13,147	10,804	9,098	9,500	12,419	...
	Uttamapalayam	14,110	12,506	11,474	9,828	9,357	8,702	10,009
Chingleput	Maduranthakam	13,968	9,216	9,720	7,592	7,133	6,499	6,266
	Uttaramerur	13,879	12,128	12,134	11,711	10,638	12,672	10,432
Tiruchirapalli	Lalgudi	13,874	12,742	7,314	9,376	16,453	...	...
South Arcot	Tirukkoyilur	13,739	16,695	14,800	13,436	10,154	10,654	8,617
Tirunelveli	Kayalpattinam	13,432	11,302	9,931	8,756	13,105	12,862	11,746
South Arcot	Kallakurichi	13,312	11,073	9,124	7,522	8,655	8,222	...
Thanjavur	Adirampattinam	13,309	13,074	10,004	10,893	10,274	10,686	10,494
Madurai	Natham	12,757	10,439	8,754	7,790	9,624	7,111	...
Tirunelveli	Srivaikuntam	12,590	11,501	9,524	10,074	10,073	11,005	10,550
South Arcot	Mannargudi	11,767	10,270	8,555	9,109	...	...	...

TABLE V - 26 (Contd.)

Non-industrial towns (Administrative, Residential, Port or Commercial) which declined in population at certain Censuses 1901-1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Salem	Hosur	11,683	8,712	6,457	6,071	5,519	5,913	6,659
Tiruchirapalli	Pallapatti	11,309	9,542	11,263	8,320	8,662	9,277	...
Thanjavur	Muthupet	11,247	9,738	7,798	6,980	6,946	9,382	9,099
Madurai	Thevaram	11,180	10,447	8,803	13,610	...	...	...
Thanjavur	Tiruvaiyaru	11,171	11,336	9,302	7,741	8,494	8,190	7,821
Tirunelveli	Nazareth	10,899	4,954	3,648	6,212	...	...	...
North Arcot	Pallikonda	10,578	10,773	9,454	8,291	7,755	8,008	...
Ramanathapuram	Manamadurai	10,574	9,106	7,189	7,788	6,527	5,184	...
South Arcot	Valavanur	10,167	8,298	7,112	7,051	7,697	8,687	...
Ramanathapuram	Kamudi	10,017	9,455	10,735	9,228	8,356	7,967	6,854
Coimbatore	Palladam	9,806	9,238	7,654	6,987	6,506	6,895	...
Salem	Kaveripatnam	9,416	8,153	7,058	...	3,570	6,668	...
North Arcot	Kalambur	9,343	9,665	9,450	7,964	7,156	6,286	...
Tiruchirapalli	Ponnamaravati	9,027	7,779	11,829	10,659	...	...	...
Thanjavur	Vallam	8,273	8,720	8,076	8,534	7,647	7,701	7,590
	Tirukattupalli	8,038	6,938	5,609	6,406	5,536	...	...
	Nannilam	7,874	7,416	...	...	...	2,745	6,727
South Arcot	Srimushnam	7,354	6,696	5,679	6,213	...	...	...
Thanjavur	Tirumalaivasal	7,326	5,903	6,113	4,807	4,643	...	...
Chingleput	Sriperumbudur	7,085	6,850	4,302	6,478	5,853	6,129	5,481
South Arcot	Ulundurpet	7,070	6,854	11,726	6,166	...	...	...

TABLE V - 26 (Contd.)

Non-industrial towns (Administrative, Residential, Port or Commercial) which declined in population at certain Censuses 1901-1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Ramanathapuram	Rameswaram	6,801	5,419	5,774	8,423	7,582	10,612	6,632
Tirunelveli	Alwartirunagari	6,753	6,654	6,284	6,345	7,090	6,820	6,630
Chingleput	Cheyyur	6,626	5,446	6,166	6,373	6,948	6,083	5,210
Ramanathapuram	Tondi	6,422	12,006	8,289	6,837	7,162	...	...
	Kottaiyur	5,778	5,846	6,249	5,293	...	...	...
	Palayampatti	5,777	6,197	5,400	5,554	6,078	5,805	4,967
	Kandanur	5,644	6,000	6,899	6,732	15,618	...	...
	Pallathur	5,560	5,581	6,315	6,671	...	...	...
Tiruchirapalli	Karambakudi	5,490	3,352	4,015	...	...	...	...
	Arimalam	5,164	4,826	6,620	5,653	...	...	...
Thanjavur	Vaitheeswarankoil	5,045	4,377	3,882	5,372	6,708	...	...
Madurai	Kiranur	5,027	4,838	5,360	...	...	...	...
Ramanathapuram	Nattarasankottai	4,511	5,789	5,498	5,666	...	...	...
	Puduvayal	4,468	4,294	4,677	4,713	...	...	...
Tiruchirapalli	Ramachandrapuram	3,828	3,963	6,045	6,095	...	...	...
	Pillamangalam	3,077	2,625	3,430	2,825	...	...	...
	Tirumayam	2,522	2,445	4,752	4,118	...	...	...
Ramanathapuram	Kilasevalpatti	2,196	2,291	2,458	2,209	...	...	...

Industrial towns which fluctuated in population

30. Table V-27 gives the industrial towns whose population have shown fluctuations between 1901—61.

TABLE V - 27

Industrial towns whose population fluctuated between 1901 and 1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
Madurai	Dindigul	92,947	78,361	56,275	43,617	30,922	25,052	25,182
Thanjavur	Kumbakonam	92,581	91,643	67,008	62,317	60,700	64,647	59,673
North Arcot	Gudiyatham	50,384	45,667	32,671	24,688	22,803	23,390	21,335
	Vaniyambadi	42,048	38,712	31,281	22,940	20,090	20,406	12,005
Chingleput	Tiruvattiyur	37,571	22,393	13,909	10,732	8,100	9,409	15,919
Tirunelveli	Tenkasi	34,403	31,074	22,862	27,339	22,071	19,940	18,128
Coimbatore	Udumalpet	28,345	23,309	17,791	12,184	10,236	10,445	10,503
Ramanathapuram	Paramakudi	25,368	22,257	17,758	16,113	19,437	18,794	16,134
North Arcot	Arcot	25,029	21,124	16,583	14,232	11,450	11,475	10,734
Tirunelveli	Sankaranayinarkoil	24,089	21,904	16,923	14,823	12,655	15,182	16,775
Salem	Rasipuram	23,871	23,125	17,764	14,438	13,978	15,238	11,512
Tirunelveli	Ambasamudram	22,447	20,356	17,540	15,602	14,118	14,207	12,869
South Arcot	Nellikuppam	22,168	20,695	13,263	13,695	12,512	13,504	13,137
Salem	Tiruchengode	21,386	19,228	15,516	12,322	10,513	4,645	8,196
Tirunelveli	Kallidaikurichi	20,232	20,019	16,031	17,074	16,996	17,263	14,913
Madurai	Tirupparankunram	18,750	9,010	5,702	5,749	5,254	...	...
Chingleput	Pallavaram	16,253	11,941	9,879	10,769	8,753	7,059	6,416
Coimbatore	Bhavani	15,860	12,133	9,090	6,896	5,536	8,716	8,637
Ramanathapuram	Sattur	15,759	13,565	9,831	8,772	8,582	6,396	7,870
North Arcot	Walajapet	13,179	12,601	11,048	11,102	10,013	9,962	10,067

TABLE V - 27 (Contd.)

Industrial towns whose population fluctuated between 1901 and 1961

Name of District	Name of Town	1961	1951	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9
North Arcot	Wandiwash	12,546	12,033	9,404	8,042	6,770	6,973	...
Tirunelveli	Tachchanallur	12,252	9,790	8,772	9,483	...	...	...
South Arcot	Bhuvanagiri	11,237	10,287	8,822	8,846	7,276	...	...
Tirunelveli	Sattankulam	10,974	9,303	8,688	7,690	5,646	7,440	6,953
Salem	Mallasamudram	10,720	10,985	...	...	...	...	...
Tirunelveli	Ettayapuram	10,135	9,470	9,130	9,150	8,662	8,636	8,788
Thanjavur	Ayyampettai	9,618	9,352	7,546	10,163	9,796	9,754	9,454
Salem	Taramangalam	9,243	9,251	6,666	...	...	...	...
Tiruchirapalli	*Tattayyangarpet*	*8,960*	*9,195*	*7,684*	...	...	...	...
North Arcot	Kaveripakkam	7,893	8,540	7,663	6,651	7,717	...	...
Tirunelveli	Kalugumalai	7,403	6,199	6,232	5,459	...	...	...
	Kadambur	6,648	7,128	...	...	...	...	...
Tiruchirapalli	Morupatti	6,626	7,200	6,005	...	...	...	...
North Arcot	Panapakkam	5,370	5,050	6,245	5,681	...	...	...
Tirunelveli	Kayattar	5,168	5,516	5,192	5,143	...	...	...
Tiruchirapalli	Labbaikudikadu	4,638	5,969	...	...	...	...	...

Immigration into urban areas

31. The growth of urban areas is to a large extent due to the extent of immigration. With the material available for investigating the extent of immigration into cities and town-groups with a population of one lakh and over and for the districts as a whole for towns of lower population denomination the following table has been constructed.

TABLE V-28

Proportion per 1,000 urban population in each district and city or town-group of population of one lakh and above classified by persons

(1) Born within the district but outside (i) the town of enumeration (ii) city/town-group (with a population of a lakh or over) in which enumerated

(2) Born out side the district of enumeration but within the State and

(3) Born in other States of India, 1961

State, District, Cities and Town-groups with population of one lakh and over	Females per 1,000 males		Persons per 1,000 Urban population born within the district but out-side (1) the town of enumeration (2) city/town-group (with a population of a lakh & over) in which enumerated			Persons per 1,000 Urban population born outside the district of enumeration, but within the State			Persons per 1,000 Urban population born in other States of India		
	Total population	Migrants	Persons per 1,000 Urban population	Males per 1,000 males	Females per 1,000 females	Persons per 1,000 Urban population	Males per 1,000 males	Females per 1,000 females	Persons per 1,000 Urban population	Males per 1,000 males	Females per 1,000 females
1	2	3	4	5	6	7	8	9	10	11	12
Madras State	**963**	**1,095**	**171**	**147**	**197**	**140**	**138**	**141**	**46**	**50**	**42**
District											
Madras City	901	843	...	...	...	259	261	256	99	108	89
Chingleput	938	1,160	202	172	233	194	177	212	54	55	54
North Arcot	986	1,334	202	164	240	71	66	76	33	30	36
South Arcot	973	1,284	239	199	280	127	118	137	33	28	38
Salem	962	1,180	206	181	232	69	65	72	18	17	19
Coimbatore	930	993	259	235	284	106	108	104	75	83	66
Nilgiri	902	882	67	56	80	201	201	200	200	216	182
Madurai	971	1,094	171	151	190	130	129	131	14	16	13
Tiruchirapalli	971	1,151	185	161	209	194	182	206	25	27	23
Thanjavur	1,004	1,283	267	219	315	116	115	117	17	17	17
Ramanathapuram	1,042	1,302	161	138	182	97	89	104	6	5	6
Tirunelveli	1,041	1,327	262	224	298	40	39	41	11	11	10
Kanyakumari	987	1,166	186	159	213	36	44	28	41	38	43
City/Town-group											
Madras (C)	901	843	...	...	...	259	261	256	99	108	89
Vellore T. G.	978	1,225	211	181	242	78	76	81	47	43	51
Salem (M)	957	976	184	180	188	68	68	68	19	20	17
Coimbatore (M)	885	840	188	178	280	108	112	103	142	159	124
Madurai (M)	952	952	119	115	122	197	199	195	18	20	16
Tiruchirapalli (M)	945	1,009	128	120	138	219	213	225	33	37	30
Thanjavur (M)	979	1,155	233	205	263	152	146	158	21	22	20
Tuticorin T. G.	966	1,030	341	322	359	72	73	71	17	21	13
Nagercoil (M)	990	1,062	453	169	205	110	56	35	105	41	45

For the whole of Madras State urban migration maintained a sex ratio of 1,095 females per one thousand males. This is a little surprising. The only districts which are exceptions to this general pattern are Madras City, Coimbatore and Nilgiri. Among cities, Coimbatore, Salem and Madurai municipalities are exceptions. It can have only one valid explanation. Residents of cities generally get their brides from villages. Coimbatore, Madras City and Nilgiri have proved exceptions because of the large influx of industrial workers who come to these places in search of employment leaving their wives at home.

Analysing the component of migration, 171 persons out of 1,000 are born within the district, but outside the place of enumeration. 140 persons are born outside the district of enumeration but within the State while 46 persons are born in other States of India. Male and female proportions are 147, 138 and 50 and 197, 141 and 42 in these categories. The last two maintain a balance between females and males. But among the category of persons born within the district but outside the place of enumeration, the female proportion is much higher than the male figure thereby amplifying the view that in general, residents of towns in every district seek their brides in rural parts This abnormal ratio has been maintained in all districts of the State as well as in the cities where women outnumber men. In the category of persons born outside the district of enumeration, the highest figure is recorded by Madras City—259 with a slightly adverse female proportion—261 against 256. Nilgiri has attracted a large number of migrants from other districts—201. Chingleput and Tiruchirapalli have also a large number of migrants—194. The lowest proportion is recorded in Tirunelveli and Kanyakumari which in general do not attract much migrants from outside the district.

Among the cities, Tiruchirapalli and Madurai have attracted the largest number of migrants from outside the district but within the State. Next is Thanjavur which has surprisingly attracted 152 migrants from outside the district. Among persons per one thousand of urban population born in other States of India and enumerated in urban sector, Madras State has only 46 of its urban population from this sector. The maximum number has been recorded by Nilgiri, one out of five being migrants from outside the State. This migration is contributed by the two States of Kerala and Mysore. Kerala has contributed a large number of its plantation workers. Again Gudalur was culturally and linguistically part of Malabar and has attracted a large number of Keralites.

Madras City has one tenth of its population as migrants from outside the State. Chingleput has also recorded a high proportion. A good percentage of outside migration is seen in Coimbatore. The position will be further clear when the figures of every city are examined. In Coimbatore city, 142 out of 1,000 population are migrants from other States in India. It shows the import of Keralite migration on Coimbatore city. Nagercoil has also recorded a high proportion—105. Nagercoil was part of Trivandrum district. Before the States' re-organisation, it had its link with Trivandrum, the capital of Kerala. Lands in and around Nagercoil are owned by persons belonging to Trivandrum. This accounts for the presence of a number of Keralites in Nagercoil. In South Arcot, North Arcot, Salem and Kanyakumari, a higher number of females are found in the migrant population. Again these are border districts except South Arcot and it is likely that men of these parts seek their brides from the adjoining areas of Mysore and Kerala where their caste-men are found. In Nagercoil, again the female proportion is higher than male. This can be explained by the tendency of persons to get their brides from Kerala. Vellore town-group has also a large number of female migrants. It is likely that the brides are got from the adjoining districts of Mysore and Andhra Pradesh. A table has been presented below showing the quantum contributed by migrants to cities and town-groups with a population of one lakh and over by other States of India.

TABLE V - 29

Persons per 1,000 of urban population born in other States and enumerated in cities and town-groups of population 1 lakh and over

Name of City/ Town-group	Andhra Pradesh			Kerala			Mysore			Maharashtra			Gujarat			Pondicherry			Rajasthan			Uttar Pradesh			West Bengal		
	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1. Madras	34	34	35	32	40	24	13	13	12	3	3	3	3	3	3	6	5	6	4	5	3	1	1	1	1	1	1
2. Madurai	1	1	1	13	14	11	1	2	1	1	1	1	N	1	N	N	N	N	N	N	N	N	N	N	N	N	N
3. Coimbatore	3	2	3	124	140	106	8	9	8	2	1	2	2	2	2	1	1	1	1	1	1	N	1	N	N	N	N
4. Salem	1	1	1	11	13	9	4	3	4	1	1	N	N	N	N	1	1	1	1	1	N	N	N	N	N	N	N
5. Tiruchirapalli	2	2	2	22	25	19	4	4	5	1	1	1	N	N	N	2	2	2	1	1	1	N	N	N	N	N	N
6. Tuticorin T. G.	1	N	1	11	11	11	1	1	1	2	3	N	N	N	...	2	3	N	N	...	N	N	N	N	N	1	N
7. Vellore T. G.	18	16	21	10	11	10	13	10	16	1	1	1	1	1	1	1	1	1	1	1	N	N	1	N	N	N	N
8. Thanjavur	1	2	1	13	15	11	2	2	2	1	1	1	N	N	...	3	3	4	N	N	N	N	N	N	N	N	N
9. Nagercoil	N	N	N	42	41	44	N	N	1	N	...	N	N	N	N	N	...	N	...	...	...	N	...	N	N	...	N

Persons per 1,000 population. Males per 1,000 males. Females per 1,000 females. N denotes negligible figures

With the help of Union Table D-IV, the characteristics of migrants into cities, especially their age and educational characteristics can be examined.

Contribution to migrant population by major States

32. 470,768 persons born outside the Madras State have been enumerated in the urban areas of the State. 415,440 persons born in other States of India have been enumerated in the urban areas of Madras State—228,736 males and 186,704 females giving a sex ratio of 816 females per 1,000 males. The major contributors are Andhra Pradesh, Kerala, Mysore and Pondicherry. 39,310 people born outside India have also been enumerated in the State. A table is presented below showing the break-up of the major States in India which have contributed migrants to the urban areas. The sex ratio of migrants from other States has also been indicated.

TABLE V - 30

Migrants from major States of India to urban areas of Madras State and sex ratio (females per 1,000 males)

State	Migrant Population		Sex ratio
	Males	Females	
1	2	3	4
Andhra Pradesh	43,297	42,892	991
Assam	124	90	726
Bihar	393	333	847
Gujarat	4,059	3,118	768
Jammu & Kashmir	191	99	518
Kerala	124,989	84,982	680
Madhya Pradesh	890	1,146	1,288
Maharashtra	5,057	4,625	915
Mysore	26,419	26,588	1,006
Orissa	326	338	1,037
Punjab	1,284	801	624
Rajasthan	5,973	3,488	584
Uttar Pradesh	1,775	1,173	661
West Bengal	1,756	1,509	859

It will be seen that migrants from the States of Andhra Pradesh and Mysore have a balanced sex ratio. Large contribution of migrants to the urban areas, viz., about 2 lakhs, is made by Kerala State. But the sex ratio is adverse. It means, Keralites come to Madras towns in search of work and do not always bring their wives with them. The maximum contribution is made by these three southern States. A significant contribution is also made by Pondicherry which has sent out 25,935 persons to Madras State. Also an adverse sex ratio is found among persons born in urban parts of Pondicherry State and enumerated in Madras. A favourable sex ratio is found among migrants from rural parts. It, therefore, shows that there are two categories of migrants from Pondicherry—persons living in Madras State marrying women belonging to Pondicherry is a normal rural pattern, while in the urban pattern, people have moved to towns in Madras State in search of employment.

Emigrants to other States and Territories

33. It will be of interest to compare this figure with out-migration which comes to 392,918-209,750 males and 183,168 females born in urban areas of Madras State and enumerated in other States of India. This gives us a net in-migration of 22,522 persons to urban areas of this State. Though Madras State is a net out-migration State, in-migration is recorded in the urban sector. It, therefore, means that loss by migration is felt by rural areas of this State and not by the urban areas. A table is given showing the out-migration from urban areas of Madras State to other parts of India.

TABLE V - 31

Persons born in urban areas of Madras State and enumerated in other States and Union Territories

State/Union Territory	Persons	Males	Females
1	2	3	4
Total	**392,918**	**209,750**	**183,168**
States			
Andhra Pradesh	75,208	37,024	38,184
Assam	1,355	988	367
Bihar	4,354	2,497	1,857
Gujarat	6,832	4,127	2,705
Jammu & Kashmir	259	123	136
Kerala	37,508	19,638	17,870
Madhya Pradesh	9,911	5,927	3,984
Maharashtra	62,654	36,305	26,349
Mysore	135,320	71,699	63,621
Orissa	3,613	2,458	1,155

TABLE V - 31 (Contd.)

Persons born in urban areas of Madras State and enumerated in other States and Union Territories

State/Union Territory	Persons	Males	Females
1	2	3	4
Punjab	2,982	1.910	1,072
Rajasthan	2,250	1,383	867
Uttar Pradesh	5,902	3,258	2,644
West Bengal	14,020	8,588	5,432
Union Territories			
Andaman & Nicobar Islands	839	622	217
Delhi	11,850	6,404	5,446
Himachal Pradesh	45	27	18
Laccadive, Minicoy & Amindivi Islands	22	11	11
Manipur	13	5	8
Tripura	19	11	8
Dadra & Nagar Haveli	6	3	3
Pondicherry	17,803	6,603	11,200
N.E.F.A.	96	88	8
Nagaland	47	44	3
Sikkim	10	7	3

A comparison of these figures with the rural migration will be of interest. The migration from the rural parts is of the order of about 7 lakhs (699,817). This point will be further discussed when the rural-urban migration of Madras State is examined in the chapter on Rural Population.

Age and educational levels of migrants to cities

34. I now analyse the characteristics of migration into cities, especially their age and educational characteristics. Subsidiary tables 1 and 2, prepared from Union Table D-IV have been reproduced below.

TABLE V - 32

D-IV-1. Distribution of 1,000 migrants to cities by age-group

Name of City/ Town-group	Total Migrants	AGE-GROUP 0–14		15–34		35–59		60+	
		M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10
Madras	1,000	79	77	258	225	177	125	29	30
Madurai	1,000	77	76	221	239	187	149	27	24
Coimbatore	1,000	90	89	259	220	171	121	24	26
Tiruchirapalli	1,000	96	91	225	246	153	138	23	28
Salem	1,000	111	87	201	256	165	128	30	22
Tuticorin T.G.	1,000	85	89	181	217	195	162	34	37
Vellore T.G.	1,000	89	93	186	261	145	160	30	36
Thanjavur	1,000	109	102	183	240	142	156	31	37
Nagercoil	1,000	107	85	191	234	150	153	38	42

TABLE V - 33

D-IV-2. Distribution of 1,000 migrants to cities by sex and educational levels

City/Town-group	Total		Illiterate		EDUCATIONAL LEVELS: Literate (without Educational Standard)		Primary or Junior Basic		Matriculation or Higher Secondary		Technical Diploma not equal to Degree		Non-Technical Diploma not equal to Degree	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Madras	543	457	124	217	133	95	137	106	113	34	3	...	...	...
Madurai	513	487	109	280	189	106	119	76	76	23	1	...	...	...
Coimbatore	543	457	125	229	166	95	149	104	82	26	2	...	...	...
Tiruchirapalli	497	503	122	261	138	109	125	102	90	25	2	...	1	...
Salem	506	494	190	305	148	96	101	77	55	15	1	...	...	...
Tuticorin T.G.	495	505	137	282	194	122	105	82	49	17	1	...	...	...
Vellore T.G.	450	550	137	323	117	99	109	98	70	27	1	...	...	...
Thanjavur	464	536	127	291	143	128	107	92	70	24	1	...	1	...
Nagercoil	485	515	117	243	174	168	102	80	72	21	1	...	1	...

TABLE V - 33 (Contd.)

D-IV-2. Distribution of 1,000 migrants to cities by sex and educational levels

EDUCATIONAL LEVELS (Contd.)

City/Town-group	University Degree or Post-Graduate Degree other than Technical Degree		Technical Degree or Diploma equal to Degree or Post-Graduate Degree: Total		Engineering		Medicine		Agriculture		Veterinary & Dairying		Technology		Teaching		Others	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Madras	29	4	4	1	2	...	1	...	...	...	...	...	...	...	1	1	...	...
Madurai	16	2	3	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...
Coimbatore	16	3	3	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...
Tiruchirapalli	15	5	4	1	1	...	...	...	...	...	...	...	...	...	1	1	2	...
Salem	9	1	2	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Tuticorin T.G.	8	1	1	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...
Vellore T.G.	11	2	5	1	1	...	3	1	...	...	...	...	...	...	1	...	...	...
Thanjavur	10	...	5	1	...	...	1	...	...	...	...	...	...	...	2	1	2	...
Nagercoil	14	2	4	1	1	...	1	...	...	...	...	...	...	...	2	1	...	...

The bulk of the migrants to the cities belong to the age-group 15—34; 258 males and 225 females per 1,000 of migrants. The next highest proportion has been shown by the age-group 35—59. A large number of migrants are seen under 0—14 age-group. They may perhaps represent the children accompanying their parents as it is not likely that migration can take place in this age-group, either in search of education or work.

There is less illiteracy among the migrant population than in the general population. Matriculation or Higher Secondary is much more prominent among the migrant population than in the general population. Thus education is an important element in migratory movement, especially between the cities of Madras State. Generally people go in search of jobs. Another aspect to be examined will be the duration of migration in the cities. It can be assumed that those who are migrants of less than 3 years duration are of an impermanent nature and those who are of more than 3 years duration may be of a fixed nature. It is determined on the typical life of the city. Its sanitation and housing has some impact on the growth of the slums. It will be of interest also to correlate this table with returns of mother-tongue and religion. Disparity among males and females is also of interest in this connection. Among the nine cities of the State, we have already indicated that Thanjavur, Nagercoil, Vellore, Tuticorin and Tiruchirapalli have recorded a more favourable female ratio. Female ratio is generally, adverse in Madras and Coimbatore, the reason being that they are in the industrial category, where migration is always disproportionate. Again because of the housing shortage seen in the cities of Madras and Coimbatore, people tend to migrate to those places without their families. Again a large element of the migrant population is from Kerala and it is their tendency to migrate without their families. No preferential bias is shown in age-group migration by males and females. It is the general experience that men go into the cities first, followed after quite some interval by the women, after the men have settled in their new work and made accommodation arrangements. Much significant information is lost by us by omission of tabulation of migrants by their marital status with age-groups. This has been attempted for the city of Madras in the State and a detailed discussion will be made in the report for Madras City after a cursory explanation of Tables D-II, D-III, D-IV and D-V.

A table has been presented below showing the distance of migration for the 9 cities in Madras State.

TABLE V - 34

Migrants from other States of India to the cities of Madras

State where born	Madras M	Madras F	Madurai M	Madurai F	Coimbatore M	Coimbatore F	Tiruchirapalli M	Tiruchirapalli F	Salem M	Salem F
1	2	3	4	5	6	7	8	9	10	11
Total	**98,229**	**73,036**	**4,285**	**3,255**	**24,101**	**16,650**	**4,696**	**3,659**	**2,523**	**2,110**
Andhra Pradesh	30,976	28,379	246	216	352	403	279	251	162	181
Assam	71	44	6	6	2	1	...	1	2	...
Bihar	227	162	3	3	11	4	2	2	4	2
Gujarat	3,120	2,327	125	81	375	306	32	23	41	41
Jammu & Kashmir	118	49	1	3	9	3	1	2	...	...
Kerala	36,523	19,295	3,130	2,299	21,192	14,201	3,270	2,272	1,615	1,137
Madhya Pradesh	466	475	15	13	25	17	14	9	7	9
Maharashtra	2,588	2,359	166	154	226	267	122	99	66	59
Mysore	11,707	10,122	329	294	1,348	1,079	523	562	411	500
Orissa	204	192	1	2	6	7	6	...	5	5
Punjab	721	454	38	13	62	53	3	5	5	5
Rajasthan	4,143	2,409	56	19	219	74	114	95	87	40
Uttar Pradesh	933	604	33	17	78	47	35	11	27	9
West Bengal	1,103	894	43	29	51	53	23	16	7	21
Andaman & Nicobar Islands	29	36	2	1	...	1	...	...	...	...
Delhi	377	381	30	21	40	32	6	10	10	6
Pondicherry	4,832	4,761	61	83	101	99	265	299	73	95
Himachal Pradesh	19	41	...	1	...	1	...	...	1	...
Goa, Daman & Diu	65	51	...	...	4	2	1	2	...	...
Laccadive Minicoy & Amindivi Islands	...	...	...	...	...	...	...	...	...	...
Manipur	6	...	...	...	...	...	...	...	...	...
Tripura	1	1	...	...	...	...	...	...	...	...

TABLE V - 34 (Contd.)

Migrants from other States of India to the cities of Madras

State where born	Tuticorin T.G.		Vellore T.G.		Thanjavur		Nagercoil	
	M	F	M	F	M	F	M	F
	12	13	14	15	16	17	18	19
Total	**1,339**	**815**	**2,678**	**3,120**	**1,259**	**1,089**	**2,190**	**2,395**
Andhra Pradesh	32	32	971	1,270	90	63	10	14
Assam	...	...	4	5	6	..	...	...
Bihar	2	...	16	9	1	2	...	...
Gujarat	7	...	35	31	1	...	5	4
Jammu & Kashmir	4	...	...	2	1	...	...	...
Kerala	733	692	673	598	817	584	2,167	2,320
Madhya Pradesh	2	3	22	19	5	19	...	...
Maharashtra	205	22	79	67	47	70	...	13
Mysore	67	45	651	953	98	91	8	32
Orissa	2	3	10	9	1	...	...	2
Punjab	9	1	1	5	...	...	...	2
Rajasthan	...	4	55	24	7	13	...	...
Uttar Pradesh	24	5	36	25	14	5	...	3
West Bengal	37	4	20	21	8	7	...	3
Andaman & Nicobar Islands	...	...	1	1	...	...	...	1
Delhi	8	...	10	4	8	5	...	...
Pondicherry	198	4	91	77	153	229	...	1
Himachal Pradesh	1	...	3	...	...	...	...	...
Goa, Daman & Diu	...	...	...	...	2	1	...	...
Laccadive, Minicoy & Amindivi Islands	8	...	...	...	...	...	...	...
Manipur	...	...	...	...	...	...	...	...
Tripura	...	...	...	...	...	...	...	...

Disparity between male and female migrants to urban areas

35. The migrants to urban areas in Madras State are 3,267,240 – 1,562,205 males and 1,705,035 females. 142,830 females are in excess. From within the district 1,540,615 persons have moved into the urban areas. They consist of 671,502 males and 869,113 females giving a female excess of 197,611. The migration components from other districts of the State to the urban areas and from outside the State but within India have a female shortage of 10,435 and 42,032 respectively. The sex pattern of migration is, therefore, clear. Any movement taking place within the district itself has a surplus female component. This is to a large extent due to the fact that the residents in urban areas choose to select their brides from rural parts.

The migration from other districts of the State is also more or less balanced, because, out of the total population of 1,255,857, 633,146 are males and 622,711 are females. The difference is inappreciable being 10,435 in a population of 12.6 lakhs. An appreciable difference of 42,032 is recorded in the migrant population from other States. A total of 209,971 persons with a difference of 40,007 (male excess) has been contributed by the State of Kerala. The tendency of the people of Kerala to migrate without their families in search of work, especially those falling under 'Service' including employment in hotels and teashops is well known. The Keralites have also shown disinclination to settle down in places to which they migrate. Actually Madras City has a surplus male population of 17,228 in respect of persons born in Kerala. The other southern States like Mysore and Andhra Pradesh have a very balanced sex ratio in the migrating population. While the male excess of Kerala is 19.1% to total migrants from that State, that of Andhra Pradesh is 0.5%. Mysore shows an excess of females i.e. 0.3% of the total migrants from that State. Surprisingly, Pondicherry has contributed a female surplus of 3,463. Most of the Pondicherry Union territory is enclaved in South Arcot district. In the urban areas of South Arcot district, the number of female migrants from Pondicherry exceed males by 2,383. It is, therefore, obvious that there is closer marital and other ties between the people of Pondicherry and South Arcot, inter-movement being frequent and the females of Pondicherry being preferred by the people of South Arcot.

No definite pattern of sex ratio can be seen in other States of India. The excess of males or females over their opposite sex expressed as a percentage of migrants from each State is given in the statement below.

TABLE V - 35

Excess of males or females over their opposite sex expressed as a percentage of total migrants from each State

State/Union Territory	Excess of males over females	Excess of females over males
1	2	3
Rajasthan	26.3%	...
Punjab	23.2%	...
Uttar Pradesh	20.4%	...
Kerala	19.1%	...
Assam	15.9%	...
Gujarat	13.1%	...
Bihar	8.3%	...
West Bengal	7.6%	...
Delhi	5.8%	...
Maharashtra	4.5%	...
Andhra Pradesh	0.5%	...
Pondicherry	...	13.4%
Madhya Pradesh	...	12.6%
Orissa	...	1.8%
Mysore	...	0.3%

It is always to be expected that more distant the place is, greater will be the disparity in sex ratio. Persons migrating to Madras from distant places like Rajasthan, Uttar Pradesh and West Bengal are in search of industry and trade. As such, it is likely that their women folk will join them later. The pattern exhibited by Rajasthan, Uttar Pradesh and West Bengal indicating the large male content in migration is therefore consistant with what could be expected. Madhya Pradesh strangely has recorded a female surplus of 12.6%. Perhaps

the persons born in Madhya Pradesh have not come to Madras in search of industry or trade. It may also indicate that children born in Madhya Pradesh to migrants of earlier decades have returned to Madras and have now been classified as migrants because migration has been determined with reference to their birth place. Actually a number of Madrasis have been employed in areas which now constitute Madhya Pradesh. Again the migration within the urban areas of the State indicates the female surplus both in the case of persons coming from rural areas and from urban areas in equal proportions, the proportions being 6.5% and 7% respectively. But among the migrants from outside the State, males exceed females both from rural and urban areas though the excess of males from rural (17.1%) is much higher than that of urban (4.4%).

Sex differences among migrants from rural and urban areas

36. The difference is considerable in southern States and high in the States of Assam, Punjab and Uttar Pradesh. These proportions are given in the statement below.

TABLE V - 36

Excess of males or females over their opposite sex expressed as a percentage of total migrants from rural and urban areas of certain States

State	Rural	Urban
1	2	3
Assam	(M) 45.1%	(M) 6.7%
Punjab	(M) 35.5%	(M) 18.3%
Uttar Pradesh	(M) 32.2%	(M) 16.2%
Kerala	(M) 24.2%	(M) 13.4%
Bihar	(M) 15.0%	(M) 6.1%
Maharashtra	(M) 19.8%	(M) 1.5%
West Bengal	(M) 11.6%	(M) 6.9%
Rajasthan	(M) 28.4%	(M) 24.2%
Gujarat	(M) 14.1%	(M) 12.3%
Mysore	(M) 11.4%	(F) 4.7%
Andhra Pradesh	(M) 3.7%	(F) 3.3%

M—Male excess
F—Female excess

Differences between the sexes among migrants by duration of residence

37. If we take into account the duration of migration, it will be found in most of the States, males exceed females in the case of migrants of less than one year duration. The proportion records a fall in the case of migrants of duration 1 to 5 years. In the case of migrants of 6 to 10 years, the proportion of females is higher than that of males and it rises much higher in the case of migrants with a duration of 11 to 15 years. In the case of migrants with a duration of 16 years and above, the proportion of males again exceeds that of females. The same pattern is found in the case of migrants from outside the district but within the State of enumeration. Among the migrants from the same district, there is a different pattern. Even among migrants with a duration of less than one year, the proportion of males is only slightly more than females. In the case of all other durations, the proportions of females exceed those of males and increase with the period of duration. Normally the tendency for migrants is for the men to move first and women to follow when facilities and accommodation are obtained. But in the inter-district movement, migration is caused by marriage also and as such a different pattern is observed. Even in the case of marriage, it may not be possible for the females to move within the first year itself. As such, the proportion of males is high in the duration of less than one year and declines from 1 to 5 years. Movement within the district can also be caused for seeking employment. Again the rate of survival is higher in the case of females and the excess proportion of females over males in the durations of 6 to 10 years and 11 to 15 years is normal. The excess of males over females among migrants of 16 years and above duration may also be due to temporary re-migration.

The excess of males or females in different durations among the migrants born elsewhere in the district, outside the district but within the State and in other States with separate data for selected States are given in Table V-37. In the distant States of Assam, Punjab, Uttar Pradesh and Bihar, the proportion of excess of males is higher in the duration of less than 1 year and declines steeply in the duration of 1 to 5 years. The proportion of excess of males in the

duration of less than 1 year is almost similar in the States of Gujarat and West Bengal. The nearer States of Andhra Pradesh and Mysore have low proportions of excess of males in the duration of less than one year. The States of Pondicherry, Madhya Pradesh and Orissa form a different pattern with excess of females over males in all durations. The States of Gujarat, Rajasthan, Uttar Pradesh, Punjab and Kerala form another pattern of excess of males over females in all durations. Migrants from Gujarat, Rajasthan, Uttar Pradesh and Punjab are mostly of businessmen who do not always take their women with them.

TABLE V - 37

Percentage excess of males or females to total migrant population by duration of residence

	Less than one year	1 to 5 years	6 to 10 years	11 to 15 years	16 years & above
1	2	3	4	5	6
Born elsewhere in the district	2·58 (M)	6.11 (F)	14.90 (F)	19.51 (F)	22.89 (F)
Born outside the district but within the State of enumeration	9.11 (M)	3.08 (M)	3.75 (F)	4.57 (F)	0.75 (M)
Other States	19.10 (M)	1.64 (F)	7.40 (F)	1.42 (F)	6. 3 (M)
Andhra Pradesh	9.26 (M)	2.28 (M)	6.88 (F)	8.05 (F)	4.91 (M)
Assam	39.53 (M)	25.33 (M)	20.00 (F)	8.33 (M)	16.67 (M)
Bihar	36.62 (M)	6.79 (M)	2.44 (F)	14.00 (F)	4.76 (M)
Delhi	10.25 (M)	8.05 (M)	7.26 (F)	2.40 (M)	20.66 (M)
Gujarat	28.31 (M)	3.99 (M)	6.39 (M)	15.12 (M)	20.52 (M)
Kerala	25.65 (M)	20.23 (M)	15.03 (M)	13.26 (M)	20.02 (M)
Maharashtra	20.54 (M)	2.08 (F)	3.58 (F)	0.76 (F)	16.94 (M)
Mysore	10.96 (M)	0.33 (M)	1.78 (F)	4.46 (F)	3.49 (F)
Pondicherry	7.36 (F)	14.33 (F)	17.33 (F)	20.14 (F)	8.07 (F)
Rajasthan	27.59 (M)	20.04 (M)	21.63 (M)	30.06 (M)	34.98 (M)
Uttar Pradesh	33.97 (M)	12.87 (M)	8.92 (M)	7.41 (M)	34.56 (M)
Madhya Pradesh	8.97 (F)	10.39 (F)	20.42 (F)	17.24 (F)	7.93 (F)
Orissa	8.03 (F)	0.41 (F)	2.22 (F)	5.00 (F)	6.38 (F)
Punjab	39.78 (M)	18.56 (M)	17.47 (M)	1.99 (M)	35.71 (M)
West Bengal	28.74 (M)	1.77 (F)	2.99 (F)	13.09 (M)	2.68 (F)

M — Males F — Females

Immigrants and emigrants whose duration of residence is less than 10 years

38. Immigrants whose duration of stay is less than 10 years, that is who have come after the last Census, number 259,130 consisting of 143,620 males and 115,510 females. The number of emigrants from the urban areas of this State to other States during 1951-61 is 271,212 consisting of 149,269 males and 121,943 females. Thus a net migration of 12,082 persons consisting of 5,649 males and 6,433 females has been recorded. The excess of out-migrants from the urban sector is only 0.13% of total population. The number of migrants who have moved to the urban areas of the State during 1951-61 and the number of migrants from the urban areas of Madras to other States are exhibited in the following table.

TABLE V - 38

Immigrants and emigrants from and to other States whose duration of residence is less than 10 years

State/Union Territory	In-migration Males	In-migration Females	Out-migration Males	Out-migration Females
1	2	3	4	5
Total	**143,620**	**115,510**	**149,269**	**121,943**
Andaman & Nicobar Islands	26	28	511	166
Andhra Pradesh	25,435	25,239	27,460	25,467
Assam	93	65	668	286
Bihar	275	211	1,665	1,206
Delhi	600	540	5,193	4,385
Gujarat	2,112	1,775	3,247	2,042
Himachal Pradesh	22	36	22	13
Jammu & Kashmir	164	88	116	131
Kerala	80,603	54,044	14,718	12,693
Laccadive, Minicoy & Amindivi Islands	3	...	11	11
Madhya Pradesh	621	800	5,176	3,342
Maharashtra	3,642	3,469	24,159	17,499
Manipur	5	...	5	8
Mysore	16,933	16,358	49,558	41,105
Orissa	227	241	1,395	766
Pondicherry	5,898	7,855	4,406	6,151
Punjab	983	582	1,776	933
Rajasthan	3,454	2,224	1,012	600
Tripura	...	...	7	6
Uttar Pradesh	1,278	865	2,499	1,779
West Bengal and Sikkim	1,246	1,090	5,621	3,351
Nagaland	...	...	44	3

Except in the States of Kerala, Jammu and Kashmir, Pondicherry, Himachal Pradesh and Rajasthan, the number of emigrants is higher than the number of immigrants. Particularly in the case of the Andaman and Nicobar Islands, the out-migrants form nearly 20 times and 6 times the number of male and female immigrants. In the States of Assam, Bihar and Maharashtra, the number of out-migrants from Madras form 6 to 7 times the number of male immigrants into the State. Kerala is a net migrating State to Madras. Because of the comparatively larger amount of unemployment in Kerala State, the possibility of a Madrasi migrating to Kerala in search of work is remote. The migration to Jammu and Kashmir can be attributed to services in the defence forces. The large number of out-migration recorded during the decade 1951-61 may be due to the break-up of the composite Madras State as a result of which many officers had to move with their families to Kerala, Mysore and Andhra Pradesh.

Migrants to cities by duration of residence

39. When the disparity between the number of males and females gets reduced, it can be assumed that the migrants have settled down with their families in the new places. When the cities of Madras are taken together, disparity between the males and females is reduced considerably with the increase in the duration of stay only in the cases of persons born in the rural areas of other States and in the case of persons born in urban areas of other States. The excess of males over females in the case of migrants who are resident in the cities for more than 3 years is less than the excess in the case of those who are resident in the cities for less than 3 years. After a reasonable duration the people have adjusted themselves to the city life. Again the disparity is much less among migrants from urban areas of other States. Normally, people from rural parts take more time to get settled in the city. In the case of persons migrating from the rural areas of the same district and outside the district but within the State, the disparity between males and females increases with the duration, but it is only 4 to 6% in the case of migrants with less than 3 years duration and in the case of migrants who are residents in the city for more than 3 years duration. The proportions of excess of males over females or *vice versa* among the migrants into the cities are exhibited in Table V-39 given below.

TABLE V - 39

Proportion of excess of males or females, among the migrants into the cities of the State

Name of city/town-group	Proportion of excess among persons born in Rural Areas of the same district and resident in the city for less than 3 years	Proportion of excess among persons born in Rural Areas of the same district and resident in the city for 3 years and more	Proportion of excess among persons born in Rural Areas outside the district but within the State and resident in the city for less than 3 years	Proportion of excess among persons born in Rural Areas outside the district but within the State and resident in the city for 3 years and more	Proportion of excess among persons born in Rural Areas outside the State and resident in the city for less than 3 years	Proportion of excess among persons born in Rural Areas outside the State and resident in the city for 3 years and more	Proportion of excess among persons born in other Urban Areas of the same district and resident in the city for less than 3 years	Proportion of excess among persons born in other Urban Areas of the same district and resident in the city for 3 years and more	Proportion of excess among persons born in Urban Areas outside the district but within the State and resident in the city for less than 3 years	Proportion of excess among persons born in Urban Areas outside the district but within the State and resident in the city for 3 years and more	Proportion of excess among persons born in Urban Areas outside the State and resident in the city for less than 3 years	Proportion of excess among persons born in Urban Areas outside the State and resident in the city for 3 years and more
1	2	3	4	5	6	7	8	9	10	11	12	13
All Cities	3.8	5.1 (F)	11.8	6.0	23.8	19.7	1.3 (F)	9.6 (F)	3.4	2.3	12.4	7.7
Madras	...	...	8.0	7.2	20.8	20.0	...	...	2.4	4.9	12.7	8.9
Madurai	8.2	1.6 (F)	13.0	2.2	24.0	29.2	1.0	5.1 (F)	3.0	1.9	5.7	7.5
Coimbatore	2 0	0.3	28.5	13.7	32.6	20.6	6.7	1.2 (F)	12.0	2.1	17.8	10.1
Tiruchirapalli	14.7	8.3 (F)	16.7	2.9	49.8	21.2	6.0	12.1 (F)	0.7	8.5 (F)	14.4	1.1
Salem	4.7	1.8 (F)	25.1	0.2	21.0	14.1	3.1	3.3 (F)	9.3	6.9 (F)	3.6	5.9
Tuticorin T.G.	5.1	4.6 (F)	23.7	4.7 (F)	29.9	28.4	2.0 (F)	18.0 (F)	15.9 (F)	6.8	2.9	69.1 (F)
Vellore T.G.	2.5 (F)	15.8 (F)	25.8	7.6	2.6 (F)	4.8 (F)	11.5 (F)	21.1 (F)	3.7 (F)	11.7 (F)	3.2	76.2
Thanjavur	11.2 (F)	11.3 (F)	11.6	2.0 (F)	37.3	15.2	11.1 (F)	12.7 (F)	1.9 (F)	7.8 (F)	14.7	3.0 (F)
Nagercoil	6.3	15.0 (F)	11.6	3.2	9.7	4.9 (F)	9.7	20.3 (F)	88.1	60.1	2.7	2.5 (F)

Madras City has a low proportion of disparity when compared with other cities. Perhaps Madras being an important cosmopolitan city, migrants have easier chances of settling down with their families. Among migrants born in rural and urban areas of other States, the disparity between males and females declines considerably with the increase in the duration of stay.

Age-group preferences of migrants to cities

40. On the basis of Subsidiary table D-IV-1, I will now examine whether migration has any preferential age-group. Normally there should be many males, because it is the working group among the population who migrates especially towards the city. The age-group 15-34 forms 33.01% of the population. In most of the cities they form only one fifth of the total migrants, the proportion being the highest in Coimbatore among males—25.9% and in Vellore town-group among females—26.1%. In Tuticorin town-group a higher proportion of male migrants (19.5%) belong to 35-59 age-group which is the highest among the cities in the State. The proportion of male migrants in the age-group 0-14 is highest in Salem —11.1% when compared to similar proportions in other cities. Salem has the highest proportion of workers among 0-14 age-group. Most of these persons are engaged in the agricultural sector. Among the migrants to the cities, 60 and over age-group forms less than 4% for males and females separately.

Occupational characteristics of migrants to cities

41. Analysing the types of occupations in which migrants are engaged in the 9 cities of the State, it is seen that the proportions are higher in the occupational groups of teachers, clerical workers, retail and whole sale traders, persons engaged in spinning, weaving, knitting and dyeing and related workers, general labourers, house-keepers, cooks, maids and related workers.

In Madras, 29.8% of female migrant workers belong to the occupational group of house-keepers, cooks, domestic servants, ayahs and nursemaids. In the cities of Coimbatore, Tiruchirapalli and Nagercoil, the proportion of female migrant workers in this group is more than 15%. In Salem only 4.1% of female migrant workers come under this group of domestic servants and house-keepers. In Salem, half of the female migrants are engaged in handloom industry. The male migrants are disbursed in all kinds of occupations. In Salem City, spinners, weavers, and related workers form 21.8% of the total male migrants. No other single group of occupation has claimed such a large percentage. Salem has the bulk of handlooms in the State and the high proportion under Textile-Cotton is quite reasonable. In Madras, 14.1% of the male migrant workers are general labourers. 11.2% of female workers also fall under this category. Nearly one fourth of the city population are slum dwellers who are mostly migrants from other districts who supply the bulk of labour force. In other cities, except Nagercoil among the female migrants who are workers, a proportion of 13 to 20% fall in this category. Tuticorin being a big trading and commercial centre with a port, general labourers form 11% among male migrant workers and 20.7% among female migrant workers. In the cities of Madurai, Coimbatore, Tuticorin and Nagercoil the proportion of migrant workers in the occupational group of spinners and weavers is high. 15.3% of male migrant workers and 27% of female migrant workers in Madurai city; 9.2% of male migrant workers and 18.9% of female migrant workers in Coimbatore city; 15.2% of female migrant workers in Tuticorin town group and 31.9% of female migrant workers in Nagercoil come under this occupational group. In these places most of the textile mills in the State are located. They are also centres for production of cloth. Textile mills provide good opportunity for women.

The proportion of male migrant workers in the occupational group of clerical and related miscellaneous workers form more than one-tenth of the male migrant workers in the cities of Madras, Madurai and Vellore town-group, the proportions being 13.6%, 10.2% and 12.4% respectively. Only 4.1% and 4.9% of male migrant workers in Tuticorin town-group and Nagercoil fall under this group. Among female migrant workers in Madras, 4.8% come under this occupational group. In other cities it is less than 2%. In Salem, Tuticorin town-group and Nagercoil it

is even less than 1%. This shows the availability of more opportunities in women employment in Madras City. The others are more backward areas and where opportunities for women is less. Apparently females do not migrate in search of work.

The wholesale and retail dealers also form a considerable proportion of workers among migrants. In Salem, Tiruchirapalli and Thanjavur, 10.6%, 9.6% and 9.3% of male migrant workers respectively come under this group. The proportion of male and female migrant workers in this group is the least in Madras—6.0% and 2.8% respectively. In all other cities, male migrant workers engaged in wholesale and retail trade form more than 6% of the total male migrant workers in their respective cities.

More than one-tenth of female migrant workers in the cities of Madras (12.1%), Madurai (10.5%), Tiruchirapalli (15%), Tuticorin (11.7%) and Thanjavur (14.7%) are teachers. In Vellore town-group and in Madras 13.2% and 7% of female migrant workers respectively fall under the group of nurses, pharmacists, and other medical and health technicians. Madras City has big hospitals and nursing homes. The Christian Mission Hospital at Vellore is a famous hospital which has attracted a large number of migrants under this group. Only in Tuticorin town-group 4.7% of male migrant workers are engaged as fishermen etc. In all other cities, the proportion is less than 0.2%. Tuticorin is a big centre for collecting pearls from the sea and the inclusion of conch and shell gatherers, sponge and pearl divers in this occupational group will account for this high proportion in Tuticorin.

6.1% of male migrant workers in Tuticorin town-group belong to the occupational group of deck and engine room rating, barge crews and boatmen. Tuticorin has a harbour which explains the high proportion in this occupational group. In Vellore town-group, 18.3% of total female migrant workers and 8% of male migrant workers belong to the occupational group of tobacco preparers and product makers. In no other city, such a high proportion of male and female migrant workers fall under this occupational group. Beedi making is an important industry in Vellore. Many migrants belonging to the nearby villages are engaged in beedi making.

Sex Ratio

42. Table V - 40 gives the sex-ratio (females per 1,000 males) for different types of cities and towns. The types are: (a) Administrative, residential and educational towns; (b) Port, trading, commercial including ship building towns; (c) Transport, storage and communication towns; and (d) Manufacturing and industrial towns.

TABLE V - 40

Females per 1,000 males in different types of cities and towns, 1901–1961

A—Administrative, Residential and Educational cities and towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
1. Manamadurai	(P)	1,004	995	1,044	1,041	1,038	1,081	1,048
2. Karaikudi	(M)	1,009	1,001	997	982	1,125	1,164	1,144
3. Srirangam	(M)	1,015	1,048	1,034	1,070	1,079	1,123	1,105

TABLE V - 40 (Contd.)

Famales per 1,000 males in different types of cities and towns, 1901-1961

A - Administrative, Residential and Educational cities and towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
4. Ambur	(M)	1,034	1,032	1,009	1,035	1,065	1,138	1,131
5. Periyakulam	(M)	1,002	1,007	1,065	1,071	1,101	1,123	1,112
6. Mannargudi	(M)	1,002	981	1,012	1,008	1,002	1,027	1,053
7. Cumbum	(M)	1,009	1,001	1,021	1,004	1,046	1,102	1,017
8. Ramanathapuram	(M)	1,036	1,065	1,030	1,086	1,086	1,163	1,103
9. Dharapuram	(M)	1,029	1,014	1,020	1,028	1,040	1,082	1,076
10. Devakottai	(M)	1,059	1,082	1,081	1,106	1,147	1,158	1,236
11. Gudalur	(P)	1,005	1,030	1,007	1,007	1,027	1,025	...
12. Krishnagiri	(P)	1,010	1,000	993	1,042	1,019	1,098	1,106
13. Shencottah	(M)	1,023	1,004	1,012	1,063	1,009	1,102	1,115
14. Vedaranyam	(P)	1,043	1,057	1,086	1,077	1,083	1,135	1,074
15. Tirumangalam	(P)	1,043	1,035	1,092	1,094	1,039	1,040	1,116
16. Ayakudi	(P)	1,028	1,049	1,028	1,095	1,097	1,085	1,123
17. Usilampatti	(P)	1,006	1,008	998	978	998	973	997
18. Porto Novo	(P)	1,139	1,194	1,136	1,174	1,149	1,185	1,302
19. Tiruchendur	(P)	1,039	1,045	1,042	963	1,145	582	537
20. Tranquebar	(P)	1,109	1,116	1,164	1,146	1,169	1,181	1,207
21. Tirupattur	(P)	1,127	1,088	1,074	1,191	1,132	1,087	1,031
22. Padmanabhapuram	(M)	1,037	1,041	1,037	1,027	993	...	...
23. Kuthanallur	(P)	1,202	1,193	1,214	1,499	1,482	1,440	1,471
24. Lalgudi	(P)	1,004	1,007	1,300	1,061	1,052	1,105	1,084

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901 - 1961

A—Administrative, Residential and Educational cities and towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
25. Tirukkoyilur	(P)	1,066	1,028	1,029	1,015	1,037	1,043	1,071
26. Kayalpattinam	(P)	1,515	1,577	1,101	1,606	1,366	1,446	1,494
27. Adirampattinam	(P)	1,170	1,194	1,002	1,264	1,313	1,271	1,247
28. Panagudi	(P)	1,056	1,086	1,057	1,060	1,051	1,030	986
29. Srivaikuntam	(P)	1,067	1,102	1,115	1,065	1,089	1,187	1,215
30. Seithur	(P)	1,044	1,075	1,033	1,027	981	1,022	1,028
31. Watrap	(P)	1,029	1,025	1,052	1,027	1,044	1,056	1,055
32. Kombai	(P)	1,009	1,008	973	1,017	1,045	1,057	1,090
33. Muthupet	(P)	1,095	1,106	1,175	1,237	1,269	1,208	1,237
34. Anamalai	(P)	1,023	1,048	1,036	1,066	1,112	1,055	1,114
35. Chetput	(P)	1,070	1,076	1,026	1,007	1,045	1,062	...
36. Nazareth	(P)	1,076	1,002	1,155	1,147	1,123	1,121	...
37. Pallikonda	(P)	1,009	1,061	1,085	1,093	1,052	1,082	1 074
38. Kamudi	(P)	1,163	1,226	1,151	1,264	1,320	1,283	1,273
39. Kalambur	(P)	1,032	1,013	999	999	1,014	990	1,037
40. Tiruvadamarudhur	(P)	1,053	1,043	1,017	1,079	1,068	1,096	1,108
41. Ponnamaravati	(P)	1,169	1,092	1,118	1,142	1,188	1,162	...
42. Kuttalam	(P)	1,026	991	1,070	1,016	1,007	1,050	1,127
43. Kodavasal	(P)	1,013	1,047	1,068	1,105	1,108	1,090	1,067
44. Nannilam	(P)	1,042	960	1,081	1,068	1,161	1,180	1,134
45. Kattuputhur	(P)	1,024	991	1,061	1,104	1,092	1,165	1,169
46. Tirumalaivasal	(P)	1,078	1,098	912	1,208	1,199	1,227	1,155

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A - Administrative, Residential and Educational cities and towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
47. Valangiman	(P)	1,010	1,009	994	1,055	1,050	1,115	1,092
48. Thallakulam	(P)	1,066	...	...	...	...	...	...
49. Alwartirunagari	(P)	1,240	1,265	1,197	1,144	1,163	1.139	1,105
50. Abiramam	(P)	1,419	1,410	1,268	1,418	1,445	1,474	1,555
51. Cheyyur	(P)	1,026	1,033	1,025	1,024	1,030	1,006	973
52. Tondi	(P)	1,312	1,159	1,287	1,406	1,243	1,512	1,502
53. Mandapam	(P)	1,016	...	...	...	...	...	...
54. Nanguneri	(P)	1,150	1,092	1,147	1,132	1,120	1,162	1,111
55. Kottaiyur	(P)	1,105	1,118	1,020	1,058	...	1,133	1,180
56. Palayampatti	(P)	1,193	1,119	1,108	1,105	1,092	1,077	1,138
57. Kandanur	(P)	1,090	1,075	1,073	1,165	1,145	1,166	...
58. Pallathur	(P)	1,118	1,072	1,023	1,027	1,140	1,154	1,168
59. Aravakurichi	(P)	1,043	1,050	1,009	1,034	1,055	1,087	...
60. Thondamuthur	(P)	1,019	...	...	...	...	...	...
61. Arimalam	(P)	1,080	1,119	1,127	1.185	1,214	1,169	...
62. Kiranur	(P)	1,116	1,233	1,160	1,168	1,254	1,198	1,182
63. Kanadukathan	(P)	1,107	...	...	...	...	...	...
64. Needamangalam	(P)	1,021	1.029	1,045	1,072	954	1,065	1,050
65. Karivalamvandanallur	(P)	1,028	1,034	1,039	1,034	1,008	1,035	1,018
66. Nattarasankottai	(P)	1,119	1,068	1,092	1,086	1,172	1,192	1,266
67. Puduvayal	(P)	1,071	1,112	1,084	1,148	...	1,069	1,114
68. Pulicat	(P)	1,012	1,060	1,008	1,089	1,058	1,089	1,059

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A - Administrative, Residential and Educational cities and towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
69. Vilathikulam	(P)	1,019	970	...	...	...	...	...
70. Ramachandrapuram	(P)	1,163	1,194	1,143	1,139	1,132	1,180	...
71. Nambuthalai	(P)	1,026	...	...	...	...	...	...
72. Devasthanam	(P)	1,020	...	...	...	...	...	...
73. Pillamangalam	(P)	1,167	1,090	1,051	1,025	1,103	...	...
74. Vadakkupoyyur	(P)	1,192	...	...	...	...	...	...
75. Kilasevalpatti	(P)	1,142	1,151	1,080	1,001	...	...	...
76. Sathamangalam	(P)	1,037	...	...	...	...	...	...
77. Elumalai	(P)	1,043	1,007	1,053	1,019	1,020	1,000	1,033

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/ town		1961	1951	1941	1931	1921	1911	1901
1. Madurai	(M)	952	967	983	985	976	999	1,012
2. Salem	(M)	957	975	963	973	978	1,024	1,057
3. Vellore	(M)	980	1,002	979	1,000	1,017	1,087	1,122
4. Thanjavur	(M)	979	1,012	1,011	991	1,041	1,097	1,096
5. Nagercoil	(M)	990	1,006	1,026	1,057	1,025	1,053	1,059
6. Mayuram	(M)	976	1,004	1,032	1,048	1,043	1,045	1,067
7. Palayamcottai	(M)	971	992	1,038	1,132	1,097	1,115	1,151
8. Pudukottai	(M)	962	976	991	1,009	1,018	1,048	1,045
9. Tiruvannamalai	(M)	972	976	982	993	1,020	1,000	1,028
10. Bodinayakanur	(M)	994	1,002	1,019	1,042	1,083	1,087	1,062
11. Villupuram	(M)	954	955	954	927	926	949	1,006
12. Chidambaram	(M)	983	1,018	1,027	1,015	1,007	1,075	1,067
13. Mettupalayam	(M)	972	962	973	958	994	1,001	...

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901–1961

A. Administrative, Residential and Educational cities and towns

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
14. Tindivanam	(M)	966	925	950	935	978	994	1,001
15. Tiruppattur	(M)	972	968	1,005	1,008	1,036	1,039	1,110
16. Tiruvarur	(M)	991	1,004	1,031	1,032	960	1,067	1,112
17. Attur	(P)	962	989	991	1,019	1,055	1,053	1,092
18. Dharmapuri	(P)	961	1,011	972	998	989	974	1,114
19. Gopichettipalayam	(M)	975	987	1,000	1,005	892	1,040	1,025
20. Pattukkottai	(P)	952	949	966	999	985	1,043	1,064
21. Allinagaram	(P)	968	966	1,024	986	972	1,020	1,042
22. Alandur	(P)	951	967	934	988	...	...	...
23. Chinnamannur	(P)	995	995	994	1,031	1,008	1,031	1,025
24. Namakkal	(P)	971	997	974	953	990	990	1,023
25. Kottur	(P)	953	1,007	1,085	1,098	1,087	1,085	1,003
26. Sirkali	(P)	975	972	984	995	999	1,005	1,006
27. Panruti	(P)	976	948	983	962	976	983	967
28. Turaiyur	(P)	971	959	1,021	1,046	999	1,028	1,088
29. St. Thomas Mount-cum-Pallavaram	(Cantt.)	954	879	987	812	938	993	1,043
30. Kotagiri	(P)	964	919	931	940	1,008	1,037	1,025
31. Sendamangalam	(P)	987	1,074	1,089	1,084	1,045	1,076	1,125
32. Melur	(P)	997	993	1,053	1,009	1,028	1,071	1,079
33. Polur	(P)	987	1,033	1,013	1,022	1,044	1,070	1,080

TABLE V-40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A — Administrative, Residential and Educational cities and towns

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
34. Vettaikaranpudur	(P)	966	1,044	1,070	1,072	1,101	1,070	1,069
35. Sholavandan	(P)	995	1,032	1,013	1,046	1,055	1,085	1,078
36. Uttamapalayam	(P)	973	987	973	983	1,004	1,047	1,029
37. Uttaramerur	(P)	992	1,019	1,027	1,014	1,035	1,002	989
38. Kulittalai	(P)	967	973	996	1,044	1,010	1,070	1,072
39. Kuzhithurai	(M)	970	981	985	918	985	...	...
40. Kallakurichi	(P)	988	982	1,025	1,010	1,092	1,043	1,103
41. Natham	(P)	994	1,018	1,015	1,031	1,047	1,113	1,070
42. Mannargudi	(P)	973	1,000	1,057	1,081	1,113	1,108	...
43. Thevaram	(P)	963	985	983	1,013	984	1,042	1,076
44. Tiruvaiyaru	(P)	997	979	1,015	995	1,036	1,100	1,100
45. Vattalakundu	(P)	978	1,028	993	1,016	1,041	1,029	...
46. Tiruttani	(P)	971	1,000	1,004	993	1,026	986	973
47. Tiruppuvanam	(P)	990	1,016	1,028	1,046	1,001	1,080	1,023
48. Valavanur	(P)	967	990	1,016	992	1,039	1,060	1,038
49. Sulur	(P)	994	1,047	1,002	1,025	1,018	1,029	1,027
50. Avanashi	(P)	961	977	997	1,012	1,001	1,041	1,013
51. Papanasam	(P)	979	1,003	1,000	939	1,070	1,034	1,087
52. Thottiam	(P)	986	992	998	1,031	1,067	1,104	1,175
53. Kaveripatnam	(P)	999	1,003	1,017	1,034	1,030	1,070	1,105
54. Aduthurai	(P)	955	...	...	...	...	...	...
55. Vallam	(P)	992	1,035	1,054	1,098	1,137	1,132	1,109
56. Tirukattupalli	(P)	967	951	961	1,013	1,053	1,385	1,064

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A — Administrative, Residential and Educational cities and towns

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
57. Nilakkottai	(P)	988	996	1,519	1,015	1.023	1,037	1,079
58. Pennadam	(P)	982	1,016	1,037	1,055	1,013	1,011	1,027
59. Sriperumbudur	(P)	952	1,020	1,086	1,009	1,015	1,039	1,050
60. Ulundurpet	(P)	964	993	1,013	963	996	1,046	...
61. Rameswaram	(P)	985	1,058	1,031	957	977	914	980
62. Ponmeni	(P)	989	...	...	...	...	...	...
63. Peraiyur	(P)	990	988	993	983	998	978	1,037
64. Alangudi	(P)	960	...	...	...	...	...	...
65 Konakkarai	(P)	971	...	...	...	...	...	...
66. Vaitheeswarankoil	(P)	981	1,058	1,059	999	826	1,159	1,151
67. Tirumayam	(P)	976	1,041	1,002	1,072	1,073	1,058	...
68. Koyambedu	(P)	990	...	...	...	...	...	...

(iii) Places with 851 to 950 females per 1,000 males in 1961

Name of city/town		1961	1951	1941	1931	1921	1911	1901
1. Coimbatore	(M)	885	890	927	909	969	1,009	1,048
2. Tiruchirapalli	(M)	945	957	961	957	988	1,006	1,045
3. Ootacamund	(M)	901	892	861	870	905	891	924
4. Chingleput	(M)	883	943	911	868	917	934	990
5. Valparai	(P)	921	...	...	...	...	...	...
6. Erode	(M)	947	960	982	895	996	988	1,013
7. Pollachi	(M)	941	937	1,034	887	903	1,023	1,038
8. Palni	(M)	937	979	1,013	1,023	1,054	1,065	1,120
9. Tambaram	(P)	915	868	986	857	895	947	987

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A — Administrative, Residential and Educational cities and towns

(iii) Places with 851 to 950 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
10. Coonoor	(M)	917	923	838	866	891	917	887
11. Mettur	(M.T.C.)	894	950	883	...	...	...	...
12. Tiruvallur	(M)	947	968	923	1,002	994	1,054	1,031
13. Satyamangalam	(P)	938	983	970	1,003	1,005	1,036	1,071
14. Colachel	(M)	939	952	946	972	964	...	...
15. Sivaganga	(P)	938	1,044	1,039	1,078	1,043	1,135	1,099
16. Vriddhachalam	(P)	928	952	1,001	972	1,067	953	962
17. Maduranthakam	(P)	946	955	958	968	986	1,016	1,027
18. O'Valley	(P)	867	...	...	...	...	...	...
19. Tiruthuraipundi	(P)	949	961	935	955	933	1,065	1,094
20. Musiri	(P)	950	970	1,034	1,065	1,094	1,106	1,109
21. Kodaikanal	(T)	927	914	973	846	888	761	819
22. Ariyalur	(P)	940	943	946	1,007	1,094	1,058	1,094
23. Poonamallee	(P)	909	933	943	954	998	1,019	1,008
24. Hosur	(P)	932	961	930	948	1,014	1,045	1,032
25. Karamadai	(P)	927	...	...	...	...	...	...
26. Manapparai	(P)	928	951	956	...	...	...	...
27. Denkanikota	(P)	923	939	941	957	964	1,062	1,062
28. Perambalur	(P)	894	918	979	1,008	1,003	1,008	1,038
29. Devarshola	(P)	900	...	...	...	...	...	...
30. Arantangi	(P)	928	987	1,101	1,187	1,170	1,143	1 198
31. Nelliyalam	(P)	934	...	...	...	...	...	...

TABLE V-40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

A — Administrative, Residential and Educational cities and towns

(iii) Places with 851 to 950 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
32. Palladam	(P)	944	982	973	989	1,026	1,019	1,060
33. Naduvattam	(P)	943	...	...	...	...	...	...
34. Harur	(P)	945	999	1,008	1,027	1,055	1,031	1,085
35. Darapadavedu	(P)	930	...	...	...	...	...	...
36. Annur	(P)	948	948	930	886	938	857	997
37. Gudalur	(P)	883	...	...	...	...	...	...
38. Ponneri	(P)	923	940	990	1,022	964	1,063	902
39. Srimushnam	(P)	906	1,032	1,002	1,019	1,077	1,044	962
40. Orathanad	(P)	839	905	1,063	928	1,212	...	...
41. Jagathala	(P)	933	...	...	...	...	...	...
42. Bhavani	(P)	947	...	...	...	...	...	...
43. Masinagudi	(P)	852	...	...	...	...	...	...
44. Meenambakkam	(P)	949	...	...	...	...	...	...
45. Eranavur	(N.P.)	856	...	...	...	...	...	...

(iv) Places with less than 850 females per 1,000 males in 1961

1. Avadi	(P)	846	...	...	...	...	...	...
2. Wellington	(Cantt.)	774	788	874	717	798	692	640
3. Neyveli Lignite Corpn.	(N.P.)	677	...	...	...	...	...	...
4. Torappadi	(P)	593	...	...	...	...	...	...
5. Bhavanisagar	(T)	818	...	...	...	...	...	...
6. Selaiyur	(P)	77	...	...	...	...	...	...
7. Courtallam	(T)	771	...	...	...	...	...	..

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

B — Port, Trading, Commercial including ship building towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
1. Nagapattinam	(M)	1,007	1,097	1,026	1,097	1,052	1,006	1,155
2. Kilakarai	(P)	1,310	1,492	1,290	1,708	1,868	1,350	1,486
3. Ilayangudi	(P)	1,436	1,389	1,486	1,524	1,508	1,497	1,540
4. Pallapatti	(P)	1,238	1,408	1,058	1,403	1,398	1,475	1,423

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

1. Tuticorin	(M)	966	985	976	980	954	978	1,010
2. Cuddalore	(M)	989	1,010	991	976	1,015	1,020	1,029
3. Karambakudi	(P)	980	990	975	...	...	...	...

(iii) Places with 851 to 950 females per 1,000 males in 1961

Madras	(C)	901	921	908	897	908	946	984

(iv) Places with less than 850 females per 1,000 males in 1961

NIL

C — Transport, Storage & Communication towns

(i) Places with 1,001 and more females per 1,000 males in 1961

NIL

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

NIL

(iii) Places with 851 to 950 females per 1,000 males in 1961

Arkonam	(M)	941	986	947	936	902	861	936
Abishekapuram (Outside Municipality)	(N.P.)	894	...	...	...	...	...	...

(iv) Places with less than 850 females per 1,000 males in 1961

NIL

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D — Manufacturing and Industrial towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
1. Kumbakonam	(M)	1,011	1,018	1,035	1,027	1,049	1,064	1,083
2. Aruppukkottai	(M)	1,015	1,040	1,035	1,042	1,042	1,054	1,046
3. Srivilliputtur	(M)	1,076	1,067	1,053	1,036	1,021	1,028	1,046
4. Vaniyambadi	(M)	1,024	1,071	1,052	1,117	1,164	1,217	1,196
5. Kadayanallur	(P)	1,018	1,013	995	1,004	1,016	1,050	1,057
6. Melapalayam	(M)	1,120	1,041	1,080	...	...	...	...
7. Tenkasi	(P)	1,033	1,037	1,038	1,072	1,059	1,100	1,103
8. Vikramasingapuram	(P)	1,021	1,014	969	946	1,006	1,011	976
9. Puliyangudi	(P)	1,010	1,042	1,010	1,033	1,011	1,024	1,033
10. Sankaranayinarkoil	(P)	1,006	1,005	994	1,001	1,027	1,015	1,001
11. Ambasamudram	(P)	1,066	1,065	1,072	1,094	1,020	1,055	1,074
12. Kallidaikurichi	(P)	1,090	1,101	1,095	1,129	1,115	1,133	1,142
13. Pernambathi	(P)	1,001	1,151	989	1,042	1,189	1,321	1,253
14. Madakulam	(P)	1,002	...	...	...	...	...	...
15. Viravanallur	(P)	1,100	1,119	1,105	1,133	1,086	1,128	1,127
16. Tiruvattipuram	(P)	1,013	980	986	1,007	1,010	1,066	1,088
17. Udangudi	(P)	1,177	1,300	1,196	1,237	1,122	1,285	1,068
18. Arumuganeri	(P)	1,090	1,112	1,160	1,184	1,215	...	...
19. Visbaram	(P)	1,033	1,182	1,067	1,136	1,175	1,317	1,287
20. Tisayanvilai	(P)	1,075	1,064	1,034	1,063	1,053	1,142	970
21. Vasudevanallur	(P)	1,037	1,009	977	1,017	974	1,036	1,020
22. Avaniapuram	(P)	1,011	...	...	...	...	...	...

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D — Manufacturing and Industrial towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
23. Wandiwash	(P)	1,007	1,044	1,000	1,004	1,023	1,030	1,028
24. Tachchanallur	(P)	1,017	1,047	1,081	1,102	1,162	1,221	1,105
25. Sholinghur	(P)	1,015	997	1,007	1,040	1,059	1,048	968
26. Sattankulam	(P)	1,104	1,146	1,186	1,171	1,148	1,328	1,261
27. Kulasekarapattinam	(P)	1,213	1,312	1,231	1,211	1,287	1,290	1,371
28. Cheranmahadevi	(P)	1,174	1,154	1,149	1,202	1,137	1,132	1,147
29. Ettaiyapuram	(P)	1,015	1,001	1,021	988	971	985	1,005
30. Manachanallur	(P)	1,023	1,056	1,035	1,053	1,047	1,116	1,137
31. Ayyampettai	(P)	1,029	993	1,002	1,048	1,011	1,087	1,099
32. Pattamadai	(P)	1,164	1,242	1,229	1,259	1,164	1,149	1,224
33. Kattukuppam	(P)	1,002	...	...	...	...	...	...
34 Ammapettai	(P)	1,017	...	...	...	...	...	...
35. Eruvadi	(P)	1,237	...	...	..	...	...	...
36. Emaneswaram	(P)	1,065	1,084	1,048	1,086	1,111	1,097	...
37. Tattayyangarpet	(P)	1,020	1,020	1,031	988	999	...	...
38. Velampalayam	(P)	1,012	...	...	...	...	...	...
39. Sawyerpuram	(P)	1,005	1,054	989	1,065	993	1,024	962
40. Attayampatti	(P)	1,004	...	...	...	...	...	...
41. Paramankurichi	(P)	1,114	...	...	...	...	...	...
42. Udaiyarpalayam	(P)	1,026	960	969	1,044	1,030	1,063	1,081
43. Kalugumalai	(P)	1,084	1,034	985	974	993	989	...
44. Pillanallur	(P)	1,003	...	...	...	...	...	...

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D — Manufacturing and Industrial towns

(i) Places with 1,001 and more females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
45. Brahmana Peria Agraharam	(P)	1,005	...	...	...	...	...	...
46. Mourupatti (Mettupalayam)	(P)	1,044	993	1,064	1,064	1,075	...	...
47. Eral	(P)	1,123	1,184	1,178	1,146	1,102	1,190	1,174
48. Puvalur	(P)	1,008	1,014	1,046	1,056	...	...	...
49. Udayendram	(P)	1,007	...	...	...	...	...	...
50. Mudalur	(P)	1,178	...	...	...	...	...	...
51. Kayattar	(P)	1,057	1,064	1,070	1,034	1,096	1,058	...
52. Darasuram	(P)	1,029	...	...	...	...	...	...
53. Thoppampalayam	(P)	1,045	...	...	...	...	...	...
54. Jaffarabad	(P)	1,005	...	...	...	...	...	...
55. Padukapathu	(P)	1,106	...	...	...	...	...	...

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

1. Dindigul	(M)	965	968	970	951	956	969	994
2. Kanchipuram	(M)	989	1,027	1,002	1,016	998	1,036	1,049
3. Tirunelveli	(M)	1,000	1,027	1,085	1,068	1,025	1,109	1,124
4. Rajapalayam	(M)	985	997	992	953	996	1,014	1,006
5. Virudunagar	(M)	973	989	1,027	1,013	1,021	994	1,080
6. Karur	(M)	973	961	979	998	993	1,019	1,020
7. Gudiyatham	(M)	989	1,006	983	1,012	1,036	1,054	1,079
8. Kovilpatti	(P)	970	945	942	930	903	867	930
9. Arni	(M)	997	1,037	1,026	1,035	1,034	1,076	1,098

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D – Manufacturing and Industrial towns

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
10. Sivakasi	(M)	987	1,009	1,076	1,089	1,080	1,095	1,101
11. Udumalpet	(M)	983	941	988	983	977	1,052	1,059
12. Paramakudi	(P)	995	1,064	1,034	1,080	1,099	1,059	1,028
13. Arcot	(M)	980	1,006	984	1,020	1,012	1,089	1,085
14. Kumarapalayam	(P)	973	991	955	987	968	961	932
15. Edappadi	(P)	970	1,033	993	1,047	1,078	1,103	1,083
16. Rasipuram	(M)	986	966	947	971	980	995	1,039
17. Ranipet	(M)	987	963	1,003	1,018	992	1,066	1,004
18. Erode (Non-Municipal)	(N.P.)	981	...	...	...	...	...	...
19. Nellikuppam	(P)	998	1,029	952	985	970	1,000	993
20. Tiruchengode	(P)	976	966	975	983	1,002	923	1,058
21. Chinnalapatti	(P)	997	...	...	...	...	...	...
22. Kaniamuthur	(P)	991	998	980	997	1,040	1,043	1,064
23. Jalarpet	(P)	961	...	...	...	...	...	...
24. Sattur	(P)	955	1,046	1,030	980	923	897	1,009
25. Vellalur	(P)	992	1,019	1,051	1,038	1,050	1,054	1,049
26. Walajapet	(M)	991	1,017	995	1,029	1,011	1,088	1,085
27. Tirukkalikundram	(P)	974	973	933	975	1,004	1,041	1,021
28. Madukkarai	(N.P.)	953	...	...	...	...	...	...
29. Kurinjipadi	(P)	960	994	1,014	961	920	953	...
30. Bhuvanagiri	(P)	978	1,015	1,008	1,026	1,010	1,015	1,036
31. Mallasamudram	(P)	984	1,003	970	987	972	977	1,014

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D – Manufacturing and Industrial towns

(ii) Places with 951 to 1,000 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
32. Chinnasalem	(P)	962	961	1,020	1,027	1,063	1,065	1,053
33. Punjaipugalur	(P)	990	1,008	968	1,036	1,059	1,061	...
34. Proddaturpet	(P)	954	997	925	959	962	924	21
35. Taramangalam	(P)	977	1,022	972	963	947	979	...
36. Jalakandapuram	(P)	994	1,021	964	...	...	...	...
37. Chettiyarpatti	(P)	974	...	...	...	...	...	...
38. Anakudi Tiru-nageswaram	(P)	993	...	...	...	...	...	...
39. Jarikondalampatti	(P)	976	...	...	...	...	...	...
40. Kaveripakkam	(P)	984	979	1,018	1,000	1,018	1,091	1,065
41. Vennandur	(P)	990	...	...	...	...	...	...
42. Arani	(P)	968	988	979	1,008	962	968	976
43. Kadambur	(P)	954	984	996	992	984	990	...
44. Singampunari	(P)	973	1,004	1,083	1,042	1,068	1,052	1,109
45. Sathuvacheri	(P)	954	...	...	...	...	...	...
46. Elampillai	(P)	969	...	...	...	...	...	...
47. Panapakkam	(P)	966	1,009	969	995	1,037	1,027	...
48. Milavittan	(P)	977	...	...	...	...	...	...
49. Konavattam	(P)	975	...	...	...	...	...	...
50. Golden Rock	(R.C &P)	954	891	931	...	...	...	...

(iii) Places with 851 to 950 females per 1,000 males in 1961

1. Tiruppur	(M)	932	949	958	922	858	968	1,020
2. Tiruvattiyur	(M)	938	998	963	941	1,038	1,014	865

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D - Manufacturing and Industrial towns

(iii) Places with 851 to 950 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in						
		1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
3. Kurichi	(P)	942	959	936	956	880	959	1,017
4. Singanallur	(P)	942	980	938	1,041	1,072	1,023	1,030
5. Uppilipalayam	(P)	934	...	...	...	...	...	...
6. Tirupparankunram	(P)	896	1,035	1,026	945	950	1,012	955
7. Pallavaram	(P)	902	960	927	940	949	986	926
8. Bhavani	(P)	946	946	917	985	988	987	1,036
9. Suramangalam	(P)	926	...	...	...	...	...	...
10. Villivakkam	(P)	922	982	974	921	995	1,002	989
11. Jayamkonda-cholapuram	(P)	942	961	948	1,019	1,030	1,063	1,020
12. Kunrathur	(P)	916	912	924	924	988	981	1,024
13. Ambathur	(P)	891	...	...	...	...	...	...
14. Kallakudi	(P)	934	...	...	...	...	...	...
15. Andipatti Jakkampatti	(P)	944	976	969	1,000	999	1,018	992
16. Anakaputtur	(P)	929	...	...	...	...	...	...
17. Omalur	(P)	931	949	1,012	945	1,027	1,051	1,129
18. Labbaikudikadu	(P)	922	969	...	...	...	...	...
19. Issa-Pallavaram	(P)	941	...	...	...	...	...	...
20. Nekkundram	(P)	929	...	...	...	...	...	...
21. Erukkancheri	(P)	932	...	...	...	...	...	...
22. Cordite Factory in Aravankadu	(N.P.)	884	...	...	...	...	...	...
23. Palavanthangal	(P)	942	...	...	...	...	...	...
24. Tirusoolam	(P)	907	...	...	...	...	...	...

TABLE V - 40 (Contd.)

Females per 1,000 males in different types of cities and towns, 1901-1961

D – Manufacturing and Industrial towns

(iv) Places with less than 850 females per 1,000 males in 1961

Name of city/ town		Females per 1,000 males in 1961	1951	1941	1931	1921	1911	1901
1		2	3	4	5	6	7	8
1. Peelamedu	(P)	829	906	930	...	1,020	1,076	1,108
2. Ganapathi	(P)	805	...	...	...	...	...	...
3. Walajabad	(P)	801	885	906	1,012	1,040	1,048	1,079

Note: For places which were treated as towns for the first time after 1901, sex ratio in respect of earlier Censuses have been worked out, wherever possible, from the figures extracted from Village Statistics.

In the category 'Administrative, Residential and Educational' cities and towns the sex ratio of one thousand and above is found in 77 towns. These towns show favourable sex ratio in which more females are found than males. List (ii) gives places with a sex ratio of 951 to 1,000. 68 places show this trend. This is a pattern more in keeping with the general sex ratio trend of Madras State. In this are included important cities like Madurai, Salem, Vellore, Thanjavur and Nagercoil. List (iii) gives the places with 851-950 females per one thousand males in 1961. 45 places are included in this. They contain important cities like Coimbatore and Tiruchirapalli. In list (iv) is contained places of abnormal sex ratio. In it are found Avadi, a military station, Wellington, a cantonment, Selaiyur, an extension of Tambaram Air Force Station, Courtallam and Bhavanisagar, two new townships. This sex ratio can be explained in that these places have recently assumed importance owing to the location of projects, and as places of tourist importance. Except labourers, generally persons seeking work in such projects move without their families. In Military cantonments there is generally a depression of sex ratio. In places of tourist importance normally more men can be counted.

In category B, 'Port, Trading and Commercial and Ship-building' towns are found 4 towns with a sex ratio of 1,001 and above. Nagapattinam has a balanced sex ratio. Kilakarai, Pallapatti and Ilayankudi though smaller towns show an abnormally high sex ratio. It can be explained by the preferential migration of males from these places.

In the range 951-1,000, will fall the municipalities of Tuticorin, Cuddalore and the panchayat of Karambakudi. In the range 851-950, Madras is the only city which has recorded the most adverse sex ratio—901. It has shown a decrease from 984 in 1901 to 901 in 1961. There was a spurt in sex ratio in 1951 compared to 1941. Perhaps it can be accounted by the fact that owing to adverse seasonal conditions in the different parts of the State, a large number of families have moved towards Madras City in search of work.

In the category of 'Transport, Storage and Communication' towns, only two towns—Abishekapuram and Arkonam are found with sex ratios in the range of 851 to 950.

Under 'Manufacturing and Industrial' towns, 55 have been listed as having favourable sex ratio, i.e, above 1,001. A good number of towns (50) have been listed with a balanced sex ratio (951 to 1,000). 24 towns have sex ratios in the range 851 to 950. The only places which have less than 850 females per one thousand males are Peelamedu, Ganapathi and Walajabad. Of these, Peelamedu and Ganapathi are industrial towns which have grown around Coimbatore city. Walajabad is a commercial centre.

Housing conditions and sex ratio in cities and towns of 50,000 and above

43. The statement below gives the towns of 50,000 population and above classified according to the proportion of households occupying less than 3 rooms and by their sex ratios.

TABLE V-41

Proportion of households occupying two rooms and less per 1,000 households and sex ratio of cities and towns with a population of 50,000 and above

Number of households with no regular room + one room + two rooms	Number of towns	Sex ratio (females per 1,000 males)			
		900 and less	901–950	951–999	1,000 and above
1	2	3	4	5	6
623–700	2	...	...	1. Nagercoil (990)	1. Tirunelveli (1,000)
701–750	2	...	1. Ootacamund (901)	1. Palayamcottai (971)	
751–800	2	...	...	1. Kanchipuram (989)	
				2. Vellore (980)	
801–850	14	1. Coimbatore (885)	1. Madras (901)	1. Gudiyatham (989)	1. Nagapattinam (1,007)
			2. Erode (947)	2. Cuddalore (989)	
			3. Tiruppur (932)	3. Salem (957)	
			4. Pollachi (941)	4. Karur (973)	
			5. Tiruchirapalli (945)	5. Thanjavur (979)	
				6. Rajapalayam (985)	
				7. Tuticorin (966)	
851 and above	8		1. Valparai (921)	1. Dindigul (965)	1. Kumbakonam (1,011)
				2. Madurai (952)	2. Aruppukkottai (1,015)
				3. Pudukottai (962)	
				4. Mayuram (976)	
				5. Virudunagar (973)	

The lowest proportion is recorded in Tirunelveli and Nagercoil in the range of 623–700. It indicates the best housing situation in the State. The sex ratios of Tirunelveli and Nagercoil are 1,000 and 990 respectively. The balanced sex ratio is to some extent a reflection of lesser housing scarcity. But when we consider Ootacamund and Palayamcottai which fall in the next range of 701–750 a slight departure is noticed. Palayamcottai has a sex ratio of 971, but Ootacamund has a sex ratio of 901. Actually, the cities of Palayamcottai, Tirunelveli and Nagercoil are situated in a belt where the sex ratio is favourable. Nilgiri has a low female sex ratio and that is reflected in Ootacamund. Therefore, we cannot conclude that housing has a direct bearing on sex ratio. In the third group fall Kanchipuram and Vellore. The sex ratios are 989 and 980 respectively which indicate a fairly balanced sex ratio and with average scarcity of housing. Fourteen towns fall within the range 801-850. With the exception of Nagapattinam whose sex ratio is 1,007, all other towns show sex ratios less than 990. The range is from 885 in Coimbatore to 989 in Gudiyatham and Cuddalore.

Nagapattinam has housing shortage, but it has a favourable sex ratio. It reflects the sex ratio of the district in which it is situated. There are 8 towns in the last group where the proportion of households possessing less than 3 rooms is 851 and above. This indicates acute scarcity of housing. Kumbakonam and Aruppukkottai have sex ratios of 1,011 and 1,015 respectively. Other towns show low sex ratios ranging between 921 in Valparai to 976 in Mayuram. Kumbakonam and Aruppukkottai reflect the sex ratios observed for the district. Thus it will be unsafe to assume that lower sex ratio is interlinked with housing scarcity. To some extent it is influenced by the conditions of the area in which the town is located. As, however, 22 towns which have a population of 50,000 and above out of 28 in the State, come under housing shortage with lower sex ratio, one may conclude that the scarcity of housing is one of the factors leading to low sex ratio in the towns.

I will now examine the sex ratio of towns in relation to the number of persons per room. The statements below give the sex ratio and number of persons per room and number of persons per household in the cities and towns whose population is 50,000 and above.

TABLE V - 42

Number of persons per room and number of persons per household and sex ratio in cities and towns with a population of 50,000 and above

City/Town	Sex ratio	Number of persons per room	Number of persons per household
1	2	3	4
1. Madras	901	2.92	4.91
2. Kanchipuram	989	2.42	4.51
3. Gudiyatham	989	2.92	5.43
4. Vellore	980	2.68	5.23
5. Cuddalore	989	3.09	5.21
6. Salem	957	3.02	5.16
7. Erode	947	2.64	4.76

TABLE V - 42 (Contd.)

Number of persons per room and number of persons per household and sex ratio in cities and towns with a population of 50,000 and above

City/Town	Sex ratio	Number of persons per room	Number of persons per household
1	2	3	4
8. Tiruppur	932	2.58	4.70
9. Coimbatore	885	2.58	4.87
10. Pollachi	941	2.72	4.90
11. Valparai	921	2.54	4.31
12. Ootacamund	901	2.14	5.12
13. Dindigul	965	3.03	4.82
14. Madurai	952	3.04	4.77
15. Karur	973	2.60	4.51
16. Tiruchirapalli	945	2.59	4.79
17. Pudukottai	962	2.99	4.75
18. Mayuram	976	3.11	4.79
19. Kumbakonam	1,011	2.92	4.63
20. Thanjavur	979	2.73	4.80
21. Nagapattinam	1,007	2.85	4.75
22. Aruppukkottai	1,015	2.97	4.79
23. Virudunagar	973	2.94	4.61
24. Rajapalayam	985	2.47	4.35
25. Tuticorin	966	2.52	4.51
26. Tirunelveli	1,000	2.02	4.31
27. Palayamcottai	971	2.21	4.63
28. Nagercoil	990	2.04	5.05

TABLE V - 43

Number of persons per room and sex ratio in cities and towns with a population of 50,000 and above

Number of persons per room	Sex ratio 900 and less	901–950	951–999	1,000+
1	2	3	4	5
2.01 to 2.20	...	Ootacamund (901)	Nagercoil (990)	Tirunelveli (1,000)
2.21 to 2.40	...	...	Palayamcottai (971)	...
2.41 to 2.60	Coimbatore (885)	Tiruppur (932) Valparai (921) Tiruchirapalli (945)	Kanchipuram (989) Karur (973) Rajapalayam (985) Tuticorin (966)	...
2.61 to 2.80	...	Erode (947) Pollachi (941)	Vellore (980) Thanjavur (979)	...
2.81 to 3.00	...	Madras (901)	Gudiyatham (989) Pudukottai (962) Virudunagar (973)	Kumbakonam (1,011) Nagapattinam (1,007) Aruppukkottai (1,015)
3.01 to 3.20	...	...	Cuddalore (989) Salem (957) Dindigul (965) Madurai (952) Mayuram (976)	...

In my Housing Report, I have assumed overcrowding as occupancy of more than two persons per room. If this test is applied, all the 28 towns suffer from overcrowding. It ranges from 2.02 persons per room in Tirunelveli to 3.11 in Mayuram. The towns may be classified in the following ranges. In the group 2-2.40, four towns—Ootacamund, Nagercoil, Tirunelveli and Palayamcottai are found. They have also lesser proportion of households coming under the category of less than three rooms. Ootacamund is the only town which shows a low sex ratio. Other towns have, in the average, more than 2.40 persons per room ranging from 2.42 in Kanchipuram to 3.11 in Mayuram. Further, these towns have higher proportions of households occupying less than three rooms. With the exceptions of Kumbakonam, Nagapattinam and Aruppukkottai, all other towns show low sex ratios ranging from 885 in Coimbatore to 989 in Gudiyatham, Kanchipuram and Cuddalore. Again, 21 towns show the same trend. So even on this basis, one can conclude that the sex ratio of the towns is to some extent determined by the area in which it is located, but it is also influenced by the shortage of housing and by the number of persons per room in the town.

Composition of sex proportions by age-groups for cities and towns

44. The table below gives the number of females per one thousand males in different age-groups.

Table V - 44

Females per 1,000 males in different age-groups

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Age-Groups	Towns in Group—A	Towns in Group—B	Towns in Group—C	Towns in Group—D	Towns in Group—E	Towns in Group—F
1	2	3	4	5	6	7
Total	969	919	936	992	...	...
0–14	979	969	1,000	980	...	...
15–34	1,018	950	953	1,071	...	...
35–59	866	779	787	889	...	...
60 & over	1,054	1,020	1,056	1,076	...	...
Age not stated	914	806	...	469	...	...

Towns under Group D, 'Manufacturing and Industrial' towns have a more favourable sex pattern. It is most adverse in Group B. In the age-group 15–34, the sex ratio in Group D is favourable. It shows a depression in the next age-group, 35-59.

It will be thus seen that in the age-group 15-34, more women are found in 'Manufacturing and Industrial' towns of the State. Sex ratio in age-group 60 + is more favourable in all groups because of the longevity which women have in preference to men. The lowest sex ratio has been recorded under 35–59 in 'Port, Trading, Commercial including ship building' towns.

Table V-45 gives the age composition of males and females expressed as percentage of male and female population respectively, all ages together for each sex being 100 in A, B, C, D, E and F types of cities and towns with a population of 50,000 and above.

TABLE V - 45

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Madras (M. C.)	Total	...	...	100	100	...	...	...	...	...	...	...	...
	0–14	...	...	35.06	37.52	...	...	...	...	...	...	...	...
	15–34	...	...	37.12	38.08	...	...	...	...	...	...	..	...
	35–59	...	...	23.91	20.04	...	...	...	...	...	...	...	...
	60 +	...	...	3.90	4.35	...	...	...	...	...	...	...	...
	A.N.S.	...	...	0.01	0.01	...	...	...	...	...	...	...	...
Tuticorin (M)	Total	...	...	100	100	...	...	...	...	...	...	...	...
	0–14	...	...	36.53	37.72	...	...	...	...	...	...	...	...
	15–34	...	...	32.11	34.93	...	...	...	...	...	...	...	...
	35–59	...	...	26.85	22.49	...	...	...	...	...	...	...	...
	60 +	...	...	4.50	4.86	...	...	...	..	...	...	...	...
	A.N.S.	...	...	0.01	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Madurai (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	37.97	39.25	...	...	...	...	...	...	...	...	...	...
	15–34	34.07	35.96	...	...	...	...	...	...	...	...	...	...
	35–59	24.18	20.57	...	...	...	...	...	...	...	...	...	...
	60 +	3.78	4.22	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	35.75	39.76	...	...	...	...	...	...	...	...	...	...
	15–34	37.54	36.26	...	...	...	...	...	...	...	...	...	...
	35–59	22.77	19.39	...	...	...	...	...	...	...	...	...	...
	60 +	3.94	4.59	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V – 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Tiruchirapalli (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	35.29	36.70	...	...	...	...	...	...	...	...	...	...
	15–34	36.09	37.34	...	...	...	...	...	...	...	...	...	...
	35–59	24.50	21.31	...	...	...	...	...	...	...	...	...	...
	60 +	4.12	4.65	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Salem (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	39.07	39.86	...	...	...	...	...	...	...	...	...	...
	15–34	33.40	35.43	...	...	...	...	...	...	...	...	...	...
	35–59	22.94	20.06	...	...	...	...	...	...	...	...	...	...
	60+	4.59	4.65	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...		...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Vellore (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	38.05	38.59	...	...	...	...	...	...	...	...	...	...
	15–34	34.12	35.59	...	...	...	...	...	...	...	...	...	...
	35–59	23.01	20.65	...	...	...	...	...	...	...	...	...	...
	60+	4.82	5.17	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Thanjavur (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	37.42	37.39	...	...	...	...	...	...	...	...	...	...
	15–34	32.12	34.31	...	...	...	...	...	...	...	...	...	...
	35–59	24.81	22.38	...	...	...	...	...	...	...	...	...	...
	60+	5.65	5.92	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Nagercoil (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	38.86	38.68	...	...	...	...	...	...	...	...	...	...
	15–34	32.31	33.53	...	...	...	...	..	...	...	...	...	...
	35–59	23.21	21.77	...	...	...	...	...	...	...	...	...	...
	60+	5.62	6.02	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Dindigul (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	39.23	39.48	...	...	...	...
	15–34	...	...	...	...	...	...	33.62	36.00	...	...	...	...
	35–59	...	...	...	...	...	...	22.95	20.19	...	...	...	...
	60+	...	...	...	...	...	...	4.19	4.33	...	...	...	...
	A.N.S.	...	...	...	...	...	...	0.01	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
	2	3	4	5	6	7	8	9	10	11	12	13	14
Kanchipuram (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	35.00	34.59	...	...	...	...
	15–34	...	...	...	...	...	...	31.75	34.87	...	...	...	...
	35–59	...	...	...	...	...	...	26.99	24.08	...	...	...	...
	60+	...	...	...	...	...	...	6.25	6.46	...	...	...	...
	A.N.S.	...	...	...	...	...	...	0.01	...	...	...	...	...
Kumbakonam (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	35.98	36.07	...	...	...	...
	15–34	...	...	...	...	...	...	32.08	33.93	...	...	...	...
	35–59	...	...	...	...	...	...	25.95	23.48	...	...	...	...
	60+	...	...	...	...	...	...	5.99	6.52		...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport. Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Tirunelveli (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0-14	...	...	...	...	...	...	35.64	35.87	...	...	...	...
	15–34	...	...	...	...	...	...	34.25	34.58	...	...	...	...
	35–59	...	...	...	...	...	...	25.36	23.26	...	...	...	...
	60+	...	...	...	...	...	...	4.74	6.29	...	...	...	...
	A.N.S.	...	...	...	...	...	...	0.01	...	...	...	...	...
Tiruppur (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	37.26	38.94	...	...	...	...
	15–34	...	...	...	...	...	...	34.75	35.62	...	...	...	...
	35–59	...	...	...	...	...	...	23.74	20.62	...	...	...	...
	60+	...	...	...	...	...	...	4.25	4.82	...	...	...	...
	A.N.S	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and.
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
	2	3	4	5	6	7	8	9	10	11	12	13	14
Rajapalayam (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	39.61	38 00	...	...	...	...
	15–34	...	...	...	...	...	...	32.26	35.30	...	...	...	...
	35–59	...	...	...	...	...	...	23.54	21.55	...	...	...	...
	60+	...	...	...	...	...	...	4.59	5.15	...	...	...	...
	A.N.S	...	...	...	...	...	...	...	...	...	...	...	...
Virudunagar (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	38.49	37.19	...	...	...	...
	15–34	...	...	...	...	...	...	33.41	34.77	...	...	...	...
	35–59	...	...	...	...	...	...	24.11	22.53	...	...	...	...
	60+	...	...	...	...	...	...	3.99	5.51	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Karur (M)	Total	...	..	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	36.92	37.07	...	...	...	...
	15–34	...	...	...	...	...	...	34.64	37.41	...	...	...	...
	35–59	...	...	...	...	...	...	24.16	21.08	...	...	...	...
	60+	...	...	...	...	...	...	4.28	4.44	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Gudiyatham (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	40.42	39.37	...	...	...	...
	15–34	...	..	...	...	...	...	30.76	34.00	...	...	...	...
	35–59	...	.	...	...	...	...	23.88	20.86	...	...	...	...
	60+	...	...	...	...	...	...	4.94	5.77	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Aruppukkottai (M)	Total	...	...	...	...	...	...	100	100	...	...	...	...
	0–14	...	...	...	...	...	...	39.29	36.55	...	...	...	...
	15–34	...	...	...	...	...	...	31.33	33.05	...	...	...	...
	35–59	...	...	...	...	...	...	24.31	23.81	...	...	...	...
	60+	...	...	...	...	...	...	5.07	6.59	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Ootacamund (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	38.82	43.25	...	...	...	...	...	...	...	...	...	...
	15–34	35.70	34.48	...	...	...	...	...	...	...	...	...	...
	35–59	22.33	18.34	...	...	...	...	...	...	...	...	...	...
	60+	3.15	3.93	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Valparai (P)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	38.95	42.88	...	...	...	...	...	...	...	...	...	...
	15–34	34.83	40.01	...	...	...	...	...	...	...	...	...	...
	35–59	24.97	15.84	...	...	...	...	...	...	...	...	...	...
	60+	1.25	1.27	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Erode (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	38.90	39.35	...	...	...	...	...	...	...	...	...	...
	15–34	34.37	35.58	...	...	...	...	...	...	...	...	...	...
	35–59	22.90	20.10	...	...	...	...	...	...	...	...	...	...
	60+	3.83	4.97	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Nagapattinam (M)	Total	...	...	100	100	...	...	...	...	...	...	...	...
	0–14	...	...	34.90	35.18	...	...	...	...	...	...	...	...
	15–34	...	...	32.43	34.85	...	...	...	...	...	...	...	...
	35–59	...	...	27.05	24.22	...	...	...	...	...	...	...	...
	60+	...	...	5.62	5.75	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Pollachi (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	37.72	40.76	...	...	...	...	...	...	...	...	...	...
	15–34	34.62	34.05	...	...	...	...	...	...	...	...	...	...
	35–59	23.39	20.43	...	...	...	...	...	...	...	...	...	...
	60+	4.27	4.76	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A M	Type A F	Type B M	Type B F	Type C M	Type C F	Type D M	Type D F	Type E M	Type E F	Type F M	Type F F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Mayuram (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	37.80	37.34	...	...	...	...	...	...	...	...	...	...
	15–34	31.54	32.92	...	...	...	...	...	...	...	...	...	...
	35–59	24.98	23.53	...	...	...	...	...	...	...	...	...	...
	60+	5.68	6.21	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Palayamcottai (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	37.35	36.54	...	...	...	...	...	...	...	...	...	...
	15–34	35.13	34.84	...	...	...	...	...	...	...	...	...	...
	35–59	22.88	22.29	...	...	...	...	...	...	...	...	...	...
	60+	4.64	6.32	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	0.01	...	...	...	...	...	...	...	...	...	...

TABLE V - 45 (Contd.)

Age composition of males and females expressed as percentage of male and female population respectively (all ages together for each sex being 100) in A, B, C, D, E & F types of cities and towns of population 50,000 and above

A. Administrative, Residential and Educational towns.
B. Port, Trading, Commercial including ship building towns.
C. Transport, Storage and Communication towns.
D. Manufacturing and Industrial towns.
E. Mining towns and
F. Railway towns.

Name of Town	Age-Group	Type A		Type B		Type C		Type D		Type E		Type F	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pudukottai (M)	Total	100	100	...	...	...	...	...	...	...	...	...	...
	0–14	36.72	36.93	...	...	...	...	...	...	...	...	...	...
	15–34	34.77	35.77	...	...	...	...	...	...	...	...	...	...
	35–59	24.28	22.61	...	...	...	...	...	...	...	...	...	...
	60+	4.23	4.69	...	...	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	...	...	...	...	...	...	...	...	...
Cuddalore (M)	Total	...	...	100	100	...	...	...	...	...	...	...	...
	0–14	...	...	39.42	38.99	...	...	...	...	...	...	...	...
	15–34	...	...	30.96	34.01	...	...	...	...	...	...	...	...
	35–59	...	...	23.96	21.42	...	...	...	...	...	...		...
	60+	...	...	5.66	5.57	...	...	...	...	...	...	...	...
	A.N.S.	...	...	...	0.01	...	...	...	...	...	...	...	...

Disparity is noticed in the age-group 35-59 in Madurai, where more men are found. The same pattern is shown by Coimbatore, Tiruchirapalli and Salem. The table given above does not justify any conclusion that there is a variation in the age-sex composition from city to city on the classification adopted by us. Perhaps the sex ratio is determined by consideration not relevant to our classification, like shortage of accommodation and high rent as in Madras City. Unless families move in search of work and both men and women are engaged in work, it is difficult for persons to take their women-folk to larger cities of the State. Actually, the growth of slums in Madras City can be attributed to the migration of rural folk from the surrounding districts in search of work and their inability to get adequate accommodation in the City.

If we look into this aspect closely, we will find that the growth of slums in Madras City can be attributed to the tendency of the rural folk to migrate in search of work for which there is adequate return.

Literacy level

45. This discussion is based on Union Table C III. A scrutiny reveals the following facts which need no special comment.

In the age-group 60 +, 37 % of males and 84.3 % of females are illiterates. But this proportion is reduced to 32.9% for males and 44.4% for females in the age-group 5-14. The difference in female literacy is so pronounced that one has to appreciate the rapid progress made in female education. The proportion of illiteracy also declines from age-group downwards :

60 +	84.3
35–59	73.5
15–34	53.4
5–14	44.4

Salem district has the highest proportion of illiteracy in the age-group 60 +, (males 52.6% and females 91.9%). Thanjavur (26.8%) has the lowest proportion of illiterates among males and Madras, 69.5% among females. In the age-group 15-34, the State average of female matriculates is 5.6%. The corresponding proportion is less in the case of South Arcot (3.3%), Salem (3.3%), North Arcot (3.4%), Ramanathapuram (3.8%) and Tirunelveli (3.6%). The proportion is high in Madras (10.3%) and in Kanyakumari (9.1%). It is an interesting point to observe that, while, in the age-group 60+, the proportion of female degree holders in the State and in the majority of the districts is negligible, in Nilgiri, 6 out of 1,000 females are degree holders. In Madras, the proportion is only 1 in 1,000. This higher proportion in Nilgiri can be explained by the presence of foreigners in Ootacamund and other hill stations of the district. The proportion of technical degree holders among the males of 60+ is 0.6%; it is striking when compared with other age-groups. Even in Madras, Chingleput, Nilgiri, Tiruchirapalli, Thanjavur and Tirunelveli, the proportions are higher than in other age-groups. This is due to the number of technical degree holders who are teachers in other districts and in medicine in Nilgiri.

From Table B III Part A, it is seen that persons qualified upto Primary level are well disbursed in the categories of Transport, Trade and Commerce and Manufacturing for males and in Other Services, Transport etc. and Household Industry for females. The male matriculates form a significant proportion in the categories of Transport, Other Services and Trade and Commerce; and female matriculates in the categories of Transport and Other Services. In the districts of Madras, Chingleput, and Coimbatore, female matriculates are found in greater proportion than the State average in Transport. In Railways and other transport establishments, many women are employed who have matriculation standard. Technical degree holders among males are concentrated in Other Services in which generally Government service is classified and under Construction. For females, the favourite categories are Other Services and Transport etc. In the case of technical diploma holders not equivalent to degree, greater proportion among males is found under Construction. Engineering degree holders among males are concentrated under Construction. All other technical degree holders are found in the category of Other Services. 45% of the workers with a degree in Technology are engaged in Manufacturing and 41% in Other Services.

Anamolies in employment

46. 12 females are found possessing a

degree in Agriculture, but only 3 of them are workers. 14 males and 1 female with degree in Medicine come under the category Cultivator in the State. It is strange that persons qualified in medicine come under the category Cultivator. But our definition of Cultivator is such that persons who are engaged in supervision or direction of cultivation have also been classified as cultivators. It is, therefore, possible that old men who have retired from active work are engaged in directing or supervising cultivation. 12 out of these 14 males are in Tirunelveli district, which has contributed a large number of persons to Government Service. One male worker in North Arcot and one in Madurai, qualified in Medicine, come under the category of Household Industry. Perhaps they may be manufacturing Ayurvedic and Unani medicines, after retirement from effective service. Two males with a degree in Agriculture come under the category of Construction and 24 males come under the category Trade and Commerce. The tables below show the number of apparently strange cases of employment:

TABLE V - 46

Persons holding degree in agriculture coming under the categories of Manufacturing, Construction and Trade & Commerce

State/District	Manufacturing		Construction		Trade and Commerce	
	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7
Madras State	**36**	...	**2**	...	**24**	...
Madras	11	...	...	...	14	...
Chingleput	1	...	...	...	...	...
North Arcot	...	...	...	...	...	...
South Arcot	9	...	...	...	...	...
Salem	...	...	...	...	...	...
Coimbatore	5	...	1	...	4	...
Nilgiri	1	...	...	...	2	...
Madurai	...	...	...	...	...	...
Tiruchirapalli	7	...	1	...	1	...
Thanjavur	1	...	...	...	1	...
Ramanathapuram	...	...	...	...	2	...
Tirunelveli	1	..	...	...	...	...
Kanyakumari	..	...	...	...	...	...

TABLE V - 47

Persons holding degree in teaching coming under the categories of Cultivator, Mining & Quarrying, Household Industry, Manufacturing, Construction, Trade & Commerce and Transport etc.

State/District	Cultivator		Mining, Quarrying etc.		Household Industry		Manufac-turing		Construction		Trade and Commerce		Transport, Storage & Communications	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Madras State	**24**	...	**9**	...	...	**1**	**43**	**4**	**2**	...	**58**	**5**	**46**	**18**
Madras	...	...	...	...	..	1	19	4	1	...	19	4	16	10
Chingleput	...	...	...	...	...	...	3	...	...	...	3	...	1	1
North Arcot	4	...	...	...	...	...	1	...	...	...	1	...	1	...
South Arcot	2	...	2	...	...	...	2	...	...	...	...	...	...	...
Salem	1	...	...	...	...	...	1	...	...	...	5	1	2	...
Coimbatore	4	...	2	...	...	...	1	...	...	...	9	...	...	...
Nilgiri	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Madurai	3	...	4	...	...	...	8	...	...	...	4	...	5	...
Tiruchirapalli	2	...	...	...	...	...	2	...	...	...	2	...	16	7
Thanjavur	6	...	...	...	...	...	2	...	1	...	7	...	2	...
Ramanathapuram	...	...	...	...	...	...	...	...	...	...	3	...	...	...
Tirunelveli	2	...	1	...	...	...	4	...	...	...	2	...	3	...
Kanyakumari	...	...	...	..	...	...	...	...	...	...	...	...	...	...

Workers in Class I towns and town-groups

47. The percentage of workers in urban areas is 34.4% as against 49.6% in rural areas. The reasons for this wide divergence will be clear when we discuss "workers."

Among the Class I towns and town-groups the percentage of workers is still lower, i.e. 32%. Actually, 52.4% of males and 10% of females are workers. While the percentage of female workers is 14.9% for urban areas as a whole in the State, Class I towns and town-groups have only 10%. The rate of female participation in work decreases with urbanity. The proportion of workers to total population shows some variation from one Class I town to another–37.4% in Salem to 30.2% in Thanjavur. The proportions in Madras, Madurai and Tiruchirapalli are also among the lowest being 30.5%, 30.7% and 30.9% respectively. The male participation rate ranges from 49.1% in Thanjavur to 54.8% in Coimbatore. In Palayamcottai town-group, Salem town and Kurichi town-group, the proportion of female workers is considerable (20.2%, 19.6% and 18.4%). The lowest proportion of 6.3% has been recorded in Madras. 30.3% of the workers of Class I towns and town-groups fall under Other Services and 24.9% under Manufacturing. Trade and Commerce has 18.3% of the total workers. Cultivation has the least proportion, its contribution being 1.1%. 28.3% of male workers and 41.8% of female workers come under Other Services. Among male workers, the proportions of Other Services, Manufacturing and Trade and Commerce are 28.3%, 27.1% and 20% respectively. Among females, Household Industry engages 26.4%. The category of Manufacturing is another activity in which an appreciable percentage of female workers are employed (12.4%). In Salem town, 36.4% of workers are engaged in Household Industry. It is the highest in the State. In Palayamcottai town-group and Nagercoil, 27.5% and 19.6% of the total workers are engaged in Household Industry. In all other towns, the proportion is less than 15%. Household Industry in Salem district is more concentrated in Salem town than in rural parts. This is in keeping with the fact that while 6.8% of rural workers in the State are engaged in Household Industry, 12.3% of urban workers are so engaged. Kurichi town-group has 44.3% of its workers in Manufacturing. In no other town the proportion of workers in Manufacturing exceeds 32%.

Workers among the working age-groups

48. 51% of the total population in the working age-group 15-59 are workers in Class I towns and town-groups i.e. 82.6% of males and 15.6% of females. The proportion among female workers in the Class I towns and town-groups is much lower than that of the urban areas as a whole (23.3%). The proportion of workers among the working age-group ranges from 48.1% in Tiruchirapalli city to 60.8% in Kurichi town-group. Among males, the proportion of workers ranges from 79.7% in Thanjavur to 88.3% in Kurichi town-group. The proportion of females ranges from 10.1% in Madras City to 31% in Kurichi town-group. The proportion of workers among the working age-group for total persons and for males and females separately is given in a tabular statement with corresponding proportions of workers out of the total population including all age-groups.

TABLE V - 48

Percentage of workers among the total population, percentage of workers in the age-group 15–59 to total population and percentage of workers in the age-group 15–59 to total population in the age-group 15–59

Name of City/ Town-group	Percentage of total workers to total population			Percentage of workers in the age-group 15–59 to total population in all age-groups			Percentage of workers in the age-group 15–59 to total population in the age-group 15–59		
	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7	8	9	10
Total of Class I Towns	*31.96*	*52.39*	*9.97*	*29.85*	*49.25*	*8.97*	*51.01*	*82.60*	*15.64*
Madras	30.48	52.22	6.33	28.97	49.79	5.85	48.56	81.59	10.07
Vellore T.G.	32.10	53.16	10.57	29.27	48.53	9.59	51.84	85.29	17.11
Salem	37.40	54.46	19.58	33.36	49.03	16.97	59.64	87.03	30.59
Coimbatore	34.31	54.78	11.18	32.17	51.71	10.09	55.35	85.74	18.13
Madurai	30.74	50.56	9.92	28.73	47.52	9.00	50.05	81.59	15.91
Tiruchirapalli	30.87	52.35	8.15	28.70	48 94	7.28	48.11	80.76	12.42
Thanjavur	30.23	49.12	10.94	27.78	45.37	9.82	48.91	79.70	17.32
Tuticorin T.G.	32.79	54.06	10.78	30.51	50.53	9.79	52.54	85.99	17.67
Nagercoil	32.37	49.77	14.80	28.86	44.99	12.58	52.09	81.03	22.75
Kurichi T.G.	36.58	53.92	18.42	34.45	50.91	17.20	60.84	88.33	30.95
Palayamcottai T.G.	36.22	52.49	20.21	32.66	48.09	17.48	55.55	81.39	29.87

Though Salem has the highest proportion of workers, it stands next to Kurichi town-group in the proportion of workers of the working age-group. Among the male workers, Coimbatore ranks first in its proportion to total population and fourth in its proportion to the working age-group and Kurichi town-group second in its proportion to total population and first in its proportion to working age-group population. Palayamcottai town-group has the highest proportion of female workers. But the proportion among the working age-group population is the highest in Kurichi town-group.

Workers among non-working age-groups

49. The proportion of workers belonging to the non-working age-group of 0–14 and 60+ is greater in rural areas than in urban areas. In the urban areas, 3.9% of the total workers belong to 0-14 age-group as against 7.3% in rural areas and 4.7% in the urban areas are in the age-group of 60+ as against 6.4% in rural areas. Among the Class I towns and town-groups, 2.8% of the workers belong to the age-group 0-14 and 3.80% to the age-group 60+. In the urban areas, out of the total population belonging to 0-14 age-group 3.6% are workers. In the Class I towns and town-groups

the corresponding proportion is 2.4% constituting 3.2% of male population of the age-group 0-14 and 1.5% of female population of 0-14 age-group. The proportion of workers among the population ranges from 1.4% in Madras City to 5.7% in Salem. The proportions are exhibited in the table below.

TABLE V - 49

Percentage of non-working age-group workers to non-working age-group population

Names of Class I towns & town-groups	Percentage of 0–14 age-group workers to 0–14 population			Percentage of 60 & above age-group workers to 60 & above population		
	Persons	Males	Females	Persons	Males	Females
1	2	3	4	5	6	7
Total of Class I Towns	2.37	3.24	1.48	27.95	47.23	9.40
Madras	1.42	2.22	0.58	24.15	42.24	6.07
Vellore T. G.	3.79	6.12	1.44	26.99	46.82	8.05
Salem	5.72	7.07	4.34	38.74	58.02	18.87
Coimbatore	2.50	3.48	1.50	28.27	46.29	10.78
Madurai	2.46	3.43	1.47	26.49	45.87	8.25
Tiruchirapalli	2.63	4.07	1.17	28.10	48.01	9.43
Thanjavur	1.87	2.46	1.27	30.22	50.02	10.94
Tuticorin T. G.	2.15	2.89	1.40	31.39	54.52	9.47
Nagercoil	3.70	3.95	3.44	35.67	57.87	14.78
Kurichi T. G.	2.02	2.58	1.44	31.98	52.30	14.11
Palayamcottai T. G.	4.52	4.04	5.01	34.47	58.75	15.35

In the more urbanised places like Madras, Coimbatore, Madurai, Tiruchirapalli, Thanjavur, Tuticorin and Kurichi town-group, the proportion of workers in the age-group 0-14 is low. It may be due to the greater realisation of the importance of education by the city folk. Again, there is no scope of an easy employment as in the agricultural sector of the rural areas. This is further confirmed by the fact that in towns like Salem and Palayamcottai town-group where urbanisation is much less, 4.5% to 5.7% of the 0-14 population are workers. Among the females of this age-group except in Palayamcottai town-group, Salem and Nagercoil, the proportion of workers in all other towns is below 1.6% and Madras has a still lower figure of 0.6%. Among males, the proportion of workers of this age-group ranges from 2.2% in Madras to 7.1% in Sālem.

33.9% of the population aged 60+ are workers in urban sector as against 54.3% in the rural areas. In the Class I towns and town-groups, 28.0% aged 60+ are workers. While 47.2% of

the male population are workers in this age-group only 9.4% of the females are workers. Among the towns highly urbanised like Madras City, Madurai, Tiruchirapalli and Coimbatore, 24 to 28% of this age-group are workers. Among the other towns, the proportion ranges from 30.2% in Thanjavur to 38.7% in Salem. 27% in Vellore town-group is an exception. The proportion of male workers to the total males of age-group 60+ varies from 42.2% in Madras City to 58.8% in Palayamcottai town-group. In most of the towns, more than half of the males of this age-group are workers. The corresponding proportion of female workers ranges from 6.1% in Madras to 18.9% in Salem.

Predominant categories in which the workers of non-working age-group are found

50. 30.3% of the workers in the age-group 0-14 are engaged in manufacturing sector in Class I towns and town-groups. Household Industry and Other Services are the two other sectors which engage one-fourth of the workers of this age-group. 25.5% come under Household Industry and 24.9% under Other Services. The lowest proportion of 0.4% is recorded under Cultivator. The female workers are mostly found in Household Industry and Other Services, the proportions being 47.6% and 33.9%. The male workers are found largely in Manufacturing and Other Services. While 39.8% of the male workers are in Manufacturing, only 9.2% of female workers fall in the same category. In manufacturing establishments, young girls below 14 are not generally employed. 20.9% of the male workers are engaged in Other Services. Among the workers of Vellore town-group, Tiruchirapalli, Tuticorin town-group and Madurai town, greater proportion are engaged in Manufacturing--55.4%, 46.1%, 38.9% and 29.8% respectively. The next highest proportion is found in Other Services in Tuticorin town-group and under Household Industry in the other three places. In Palayamcottai town-group, Thanjavur and Nagercoil, greater proportion of workers are engaged in Household Industry and next in Other Services except in Salem where the second place goes to Manufacturing. In Coimbatore town, Madras City and Kurichi town-group, the greater proportion of the workers of this age-group are found in Other Services; 41.6%, 39.9% and 29.1% respectively of the workers of 0-14 age-group are engaged in Other Services.

Among the workers of the age-group 60+, 29.3% are found in Other Services and 24.3% in Trade and Commerce. Manufacturing and Household Industry have 15.8% and 12.6% respectively. All other categories have much lower proportions. Female workers are found in Other Services and Household Industry—40.3% and 23.3% respectively. Among the male workers 27.1% are found in Other Services and 25.5% in Trade and Commerce. Among the Class I towns and town-groups, Madras, Kurichi town-group, Coimbatore, Tiruchirapalli and Thanjavur have 37.9%, 24.8%, 29.3%, 30.3% and 31.3% of workers under Other Services respectively. Trade and Commerce has the next higher proportion except in Kurichi town-group. In Madurai, Vellore town-group and Tuticorin town-group, Trade and Commerce account for the greater proportion and Other Services the next. 32.1%, 28.3% and 25.7% of the workers in Madurai, Vellore town-group and Tuticorin town-group respectively, fall in the category Trade and Commerce. In Salem, Palayamcottai town-group and Nagercoil Household Industry has a larger proportion of workers of the age-group ranging from 38.7% to 22%.

In the younger age-group, female workers are primarily found in Household Industry and Other Services and *vice versa* in the older age-group. Male workers of the younger age-group are found in Manufacturing and Other Services and in the older age-group in Other Services and Trade and Commerce.

Workers in Class II towns and town-groups

51. In the Class II towns and town-groups, 36.0% of the total population are workers–54.0% among males and 17.4% among females. All these proportions exceed those of the urban areas of the State. One fourth of the total workers fall under Other Services. 26.2% of total workers with 25.9% of male workers and 27.2% of female workers are engaged in Other Services. Manufacturing has 18.2% of the total workers. A larger proportion, 20.8% is found in Manufacturing among males. In Household Industry, females have a high representation. Household Industry

and Trade and Commerce are the only other categories which have more than 10% of the total workers. In the category of Construction, only 3.2% of the workers are engaged. As is to be expected, the least proportion of male workers is found among Agricultural Labourers and female workers in Transport. 57.5% of the working age-group population are workers, 86.2% among males and 27.5% among females. It falls slightly short of of the corresponding proportion for the urban areas of the State. Among the workers of the working age-group, one-fourth are engaged in Other Services and less than one-fifth in Manufacturing. Other Services and Manufacturing account for the higher proportion of male workers and Other Services and Household Industry for female workers. 26.7% and 22.9% of male workers of 15–34 age-group and 25.8% and 18.9% of 35–59 age-group are engaged in Other Services and Manufacturing respectively. 26.3% and 26.7% of female workers of 15-34 age-group and 28.9% and 22.6% of female workers of age-group 35-59 are engaged in Other Services and Household Industry. 3.7% of the population of the younger working age-group of 0–14 and 34.9% of the population of the older non-working age-group of 60+ are workers. 31% of the workers in the younger group (0-14) are engaged in Household Industry, 21% in Other Services and 19% in Manufacturing. In other categories only less than 10% of the total workers of 0-14 age-group are engaged. Nearly, half of the female workers are found in Household Industry and one-fourth in Other Services. Among males, one-fourth are found in Manufacturing and one-fifth each in Household Industry and Other Services. The proportion of male workers of age-group 60+ engaged in Household Industry is much less in this age-group in comparison with 0-14 age-group. Among female workers of this age-group, 32% are engaged in Household Industry. 11.4% of the total workers of 60+ are Cultivators. In all other age-groups, Cultivators do not form more than 5% of the workers.

Class III towns and town-groups

52. 35.7% of the total population of Class III towns and town-groups are workers, 53.1% among males and 18.2% among females. 28% of the workers are engaged in Other Services. One feature which distinguishes it from Class I and II towns and town-groups is the high percentage of Cultivators. 57.4% of the working age-group form the workers of this Class. 86.3% of males and 28.3% of females of the working age-group are workers. The percentage of workers more or less conform to the general pattern in the urban areas of the State. Other Services account for 29.2% of the 15–34 age-group and 28.5% of the 35–59 age-group. Manufacturing accounts for the next proportion in 15–34 age-group. As in other Classes of towns and town-groups, Household Industry has a large proportion of female workers. The lowest number of male workers is found in Construction and the lowest among female workers in Transport and Storage etc. 4.5% of the 0–14 age-group and 36.5% of the 60+ are workers. 5.1% of the male population and 3.9% of female population belonging to the age-group of 0-14 are workers. One fourth of the total workers in this age-group are engaged in Household Industry and one fifth in Other Services. Among the female workers, the highest proportion is in Household Industry and among the male workers in Manufacturing. The lowest proportion of 0.9% of male workers and 0.2% of female workers is found in Transport. 59.4% of the males and 15.2% of the females of 60+ are workers. One fifth of the total workers of this age-group comprising of 22% of total male workers and 12% of total female workers are Cultivators.

Distribution of workers in Class IV towns and town-groups

53. 35.6% of the total population are workers (53.5% males and 17.5% females). The most important category is Other Services followed by Cultivator. This group has a higher percentage of Cultivators (15%) than the other higher classes of towns and town-groups. In Household Industry only 11% of the total workers are engaged which is less than the proportion of workers engaged in Trade and Commerce and Manufacturing. The lowest proportion of 3.6% of male workers is in Construction and 0.2% of female workers is in Transport. 56.7% of the normally working age-group are workers comprising 86.2% of males and 27.4% of females of this age-group. 27% of the male workers of 15-34 age-group are in Other Services. The next

higher proportion is found in Manufacturing (16.9%). In 35-59 age-group more than one fourth of male workers are in Other Services and 16.9% in Cultivator. Among the female workers of 15-34 age-group, Other Services has 27.7% of the workers and Household Industry 22.5%. In the 35-59 age-group female workers, Cultivation has an important role next to Other Services. 4.3% of the 0-14 age-group and 38.9% of the age-group 60+ are workers. Among the males of 0-14 age-group 5.3% and among the females 3.2% are workers. The pattern is similar to other class of towns. One third of the female workers of 0-14 age-group are engaged in Household Industry, one fourth in Other Services and 13.7% as Agricultural Labourer. Among all classes of towns, the proportion of female workers of 0-14 age-group engaged as Agricultural Labourer is the highest in this class. 63.1% of the males and 15.2% of the females of 60+ are workers. Among the workers of 60+, 30% are Cultivators. The other important category is Other Services. 8% of the workers of this age-group are Agricultural Labourers with 6.2% male and 15.4% female workers.

Working population in Class V towns and town-groups

54. 39.1% of the total population of this group are workers (55.4% of males and 22.7% of females). The proportion of total workers is higher than the urban average. The proportion of female workers is higher by 9%. The proportions of total workers, male workers and female workers are the highest in this class among all the six classes of towns and town-groups. Other Services and Household Industry account for 22.6% and 22.1% respectively of total workers. 15.9% of the workers are Cultivators. In the other categories only less than 12% are engaged. Next to Other Services which has 23.2% of male workers, Household Industry and Cultivation account for the greater proportion of male workers with 17.2% and 16.3% respectively. Among the females, 33.9% are engaged in Household Industry and 21.1% in Other Services. 61.2% of the total persons of the working age-group are workers (88.3% of males and 34.6% of females). They are the highest for all classes of towns. Among male workers, in the age-groups 15-34 and 35-59, the category of Other Services accounts for the proportions of 24.4% and 23.6%. The next higher proportion of 18.2% of male workers of 15-34 age-group are engaged in Household Industry and 19% of 35-59 age-group in Cultivation. Mining and Quarrying etc., accounts for the lowest proportion of male workers in the 35-59 age-group and Construction in 15-34 age-group. In both these age-groups the highest proportion of female workers is found in Household Industry and the next in Other Services. 36.8% and 20.5% in 15-34 age-group, 27% and 23% in the age-group 35-59 are in Household Industry and Other Services. In the age-group 0-14, 6.1% and in the age-group 60+, 43.6% are workers. These proportions are higher than those of the urban areas as a whole and the highest among all the six classes of towns and town-groups. 38.8% of the workers in the age-group 0-14 comprising of 28.4% of male workers and 52.5% of female workers are engaged in Household Industry. Other Services account for the next highest proportion of male and female workers of this age-group. Among the 60+ age-group, 29.5% are engaged in Cultivation. This is the only category which accounts for such a high proportion of total workers of this age-group. The proportion of female workers is the highest in Household Industry and Other Services.

Class VI towns and town-groups

55. 35.3% of the total population are workers (52.9% of males and 18.3% of females). About one fourth of the workers are engaged in Other Services and one fifth in Cultivation. This is the highest proportion under Cultivation in all classes of towns and town-groups. In the urban areas only 6.8% of the total workers are Cultivators. It is likely that the pattern will approximate to more and more to that of the rural areas. Consequently the proportion of female workers in Cultivation is not only the highest among the proportion of female workers in the different categories, but is also higher than that of the male workers in Cultivation. While 19.8% of male workers are Cultivators, 22.4% of the female workers are Cultivators. 54.9% of the population of the working age-group with 82.9% of males and 27.7% of females are workers. Among the male workers of 15-34 age-group, 29.4% are in

Other Services and 15.6% in Cultivation. Among the male workers of 35–59 age-group, 27.4% are in Other Services and 22.5% in Cultivation. Household Industry accounts for the highest proportion of female workers of 36.8% in the age-group 15–34. Cultivation accounts for the highest proportion of 28.6% of the female workers of 35-59 age-group. 4.5% of the 0-14 age-group and 37.8% of the 60+ age-group are workers. 5.4% of the males in 0-14 age-group and 60.6% of 60+ age-group are workers. Among the females of 0–14 age-group, 3.5% are workers and among the females of 60+, 17.5% are workers. One fourth of the workers in 0–14 age-group are in Household Industry and another one fourth in Other Services. Among the male workers of 0-14 age-group, the highest proportion of 24.7% is engaged in Other Services. Household Industry accounts for the next highest proportion of male workers with 17.4% engaged in it. Among the female workers of 0–14 age-group, Household Industry accounts for 36.7% and Other Services 24.6%. In the older age-group of 60+, 35.3% are engaged in Cultivation. 36.5% and 31.6% of male and female workers respectively in this age-group are Cultivators.

Workers in the six classes of towns and town-groups

56. A statement furnishing the percentage of total, male and female workers to the population arranged in the rank of their percentages is given below :

TABLE V - 50

Percentage of workers to total population in the six classes of towns and town-groups

Class of towns and town-groups	Total	Males	Females
1	2	3	4
Class V	39.1	55.4	22.7
Class II	36.0	54.0	17.4
Class III	35.7	53.1	18.2
Class IV	35.6	53.5	17.5
Class VI	35.3	52.9	18.3
Class I	32.0	52.4	10.0

All the three percentages are highest in the Class V towns and town-groups. The scope for agriculture in urban areas of the State is limited. Under-employment in the agricultural sector normally found in rural areas does not exist in urban areas. The proportion of female workers is also lower in the urban areas and particularly in Class I towns and town-groups.

Workers in the working age-group among the six classes of towns

57. The proportion of workers to the total population in the working age-group in various classes of towns and town-groups is given below :

TABLE V - 51

Percentage of workers to total population in the age-group 15–59 in the six classes of towns

Class of towns and town-groups	Total	Males	Females
1	2	3	4
Class V	61.2	88.3	34.6
Class II	57.5	86.2	27.5
Class III	57.4	86.3	28.3
Class IV	56.7	86.2	27.4
Class VI	54.9	82.9	27.7
Class I	51.0	82.6	15.6

It may be seen that Class VI ranks fifth in the proportion of workers to the total population, as well as in the proportion based on the working age-group. Class III towns and town-groups ranks third in the proportion of workers to the total population, and in the working age-group.

Percentage of workers in the age-groups 0-14 and 60+ among the six classes

58. The proportion of workers among the age-groups of 0–14 and 60+ are given in the statements below.

TABLE V - 52

Percentage of workers to total population in the age-group 0-14 in the six classes of towns

Class of towns and town-groups	Total	Males	Females
1	2	3	4
Class V	6.1	6.9	5.4
Class VI	4.5	5.4	3.5
Class III	4.5	5.1	3.9
Class IV	4.3	5.3	3.2
Class II	3.7	4.4	2.9
Class I	2.4	3.2	1.5

TABLE V - 53

Percentage of workers to total population in the age-group 60+ in the six classes of towns

Class of towns and town-groups	Total	Males	Females
1	2	3	4
Class V	43.6	68.4	20.1
Class IV	38.9	63.1	15.2
Class VI	37.8	60.6	17.5
Class III	36.5	59.4	15.2
Class II	34.9	57.3	14.2
Class I	28.0	47.2	9.4

In the Class II towns and town-groups, though the proportion of workers among the working age-group is comparatively high, workers among the non-working age-groups are comparatively low. In the Class I towns and town-groups among the working age-group the proportion is the lowest and in the non-working age-groups of 0–14 and 60+ the proportion of workers is also the lowest among the six classes. In the Class V towns and town-groups both among the working age-group and non-working age-groups, workers form the highest proportion among all the classes.

Comparative study of the distribution of workers in the six classes of towns and town-groups

59. In all the six classes of towns and town-groups, the proportion of workers in the category of Other Services is the highest. It ranges from 23% to 30% of total workers. Only in Class V, the proportion of persons working in Household Industry is less than the proportion of workers engaged in Other Services by 0.5%. In all other classes, difference between the highest proportion and the next highest ranges from 6% to 13%. Among female workers in the first four classes, the proportion of the workers in Other Services is the highest. In Class V, it stands next to that of Household Industry and in Class VI it is lower than those of Household Industry and Cultivation. The proportion of Cultivators increases from class to class viz. from 1.1% in Class I to 20.4% in Class VI. The proportion of Agricultural Labourers also increases gradually from 1.2% to 11.6% in Class V. But in the last class, the proportion of Agricultural Labourers falls to 8.4%. Though 20.4% of the workers are Cultivators, only 8.4% are Agricultural Labourers in Class VI. It can perhaps be inferred that owner cultivation is more prevalent in Class VI towns and town-groups than in others. Except in Class V towns and town-groups the proportion of female workers working as Cultivators is slightly greater than the proportion of male workers working as Cultivators. In the case of Agricultural Labourers, in all the classes, the proportion of female workers is more than double that of the male workers. Class II only has 9.1% of its workers engaged in Mining and Quarrying etc., and in all other classes, the proportion falls below 6%. In Class II towns and town-groups, 15.6% of female workers are found in Mining and Quarrying etc., while in other classes less than 6% are found. Among Class II towns and town-groups of all the districts, Coimbatore has the highest proportion of 30.5%. 52.8% of female workers are engaged in this sector. In Valparai which is a Class II town of Coimbatore district, 75% of male workers and 93% of female workers are engaged in this sector. The proportion of workers in Household Industry is the highest in Class V, the proportion being 22.1%, and in the other classes, the proportion falls below 15%. In every class of towns and town-groups more than one fifth of the female workers are engaged in Household Industry. The proportion of workers engaged in Manufacturing gradually decreases from class to class, from 24.9% in Class I to 9.7% in Class VI. From this it can be inferred that manufacturing concerns are concentrated in the thickly populated towns, particularly in cities. In all classes, the proportion of male workers in more than double that of the female workers in this sector. In Construction, the proportion of workers is almost similar in all classes except in Class V. The proportion ranges from 3% in Class VI to 3.8% in Class I. In Class V, only 2.1% are engaged in this sector. The proportion of female workers in this category is less than that of males for all classes. All the Class I towns and town-groups are generally centres of trading and commercial activities. The proportion of workers in this sector is the highest in Class I with 18.3%. It decreases gradually from class to class till Class V. But in Class VI a slight increase is again recorded. In this category also the proportion of male workers is more than

double that of female workers. The need and scope for transport and communication is greater in places which are heavily populated and which have, as a consequence, more trading and commercial activities. The proportion of workers in this category falls from 59.% in Class I to 2.4 in Class V. Only in Class I towns and town-groups 1.5% of female workers are engaged in this sector. In all other classes, the proportion falls below 0.5%. In cities females are employed in transport companies and postal and telephone departments. Generally Other Services, Manufacturing and Trade and Commerce have large proportions of male workers, and Household Industry and Other Services have large proportions of female workers.

Distribution of non-working population in urban sector by categories

60. 81.2% of non-workers among males and 48.8% of non-workers among females fall within the age-group 0-14 and 60+. 76.9% are in 0-14 age-group for males and 43.7% in 0-14 for females, the balance being in age-group 60+. The pattern is identical in all the districts. In Nilgiri, the proportion of 0-14 age-group among females is 25% higher than the State average. In this district, there is greater employment of females of more than 14 years in the plantations. The proportion of 60+ among the non-working population is similar throughout the State (4.3% for males and 5.1% for females) except in Nilgiri. 15.3% and 3.5% of males not at work belong to age-groups 15-34 and 35-59. No district has recorded any low or high variation except Nilgiri where the proportion of 35-59 age-group constitutes a lower proportion of 2.3%. 33.2% and 18% of females belong to the age-groups 15-34 and 35-59 respectively. Most of them are house-wives. Out of the total non-working females, 51.7% are engaged in household duties. Out of the male non-workers, 44.7% are students and 44.6% are dependents. The unemployed constitute 4.5%, 3.1% seeking employment for the first time and 1.4% being in search of employment after retrenchment. Of the female non-workers, 28.8% are dependents and 17.6% are full time students. The proportion of full time students to non-workers in urban sector is higher than the corresponding proportion in rural sector. In no district, the proportion in urban areas varies above or below 33% of the proportion for the State. Kanyakumari has the highest proportion of full time students—48.7% males and 22.8% females. Out of the total non-workers, particularly among females, the proportion is much higher than 25% of the State average. 558 persons constituting 430 males and 128 females have been classified as full time students in 35-59 age-group. This is higher than the rural area. Tirunelveli has recorded the highest figure under this group.

TABLE V - 54

Number of full time students in the age-group of 35-59 in urban areas

State/District	Total	Males	Females
1	2	3	4
State	**558**	**430**	**128**
Tirunelveli	234	190	44
Madras	111	64	47
North Arcot	43	40	3
Madurai	40	33	7
Coimbatore	23	22	1
Tiruchirapalli	22	15	7
Chingleput	21	13	8
Thanjavur	20	19	1
Salem	13	13	...
South Arcot	11	6	5
Nilgiri	10	7	3
Kanyakumari	8	7	1
Ramanathapuram	2	1	1

It can be explained by the existence of institutions for training teachers. No age restriction is imposed on this course. Stray cases of research scholars can also to be found in this age-group.

Females engaged in household duties constitute 51.7% of female non-workers in the urban areas. The corresponding proportion in the rural sector is 46.4%. This perhaps can be explained by the larger participation rate in agriculture and household industry, two occupations predominating the rural areas made possible by a revision in the definition of worker.

Males engaged in household duties

61. In the districts of South Arcot, Thanjavur, Chingleput, Tiruchirapalli, Ramanathapuram Tirunelveli, Nilgiri and Kanyakumari, the

proportion of males engaged in household duties is higher than 33% of the State average. The proportion for the State is only 0.4%.

TABLE V - 55

Percentage of males engaged in household duties to total non-workers in districts which are higher by 33% of the State average

State/District	Percentage of males engaged in household duties to total non-workers
1	2
State	**0.4**
South Arcot	1.8
Thanjavur	1.2
Chingleput	1.2
Tiruchirapalli	0.9
Ramanathapuram	0.9
Tirunelveli	0.8
Nilgiri	0.7
Kanyakumari	0.6

The total number of males recorded as house-wives in the urban areas is given below:

TABLE V - 56

Number of house-wives among male non-workers in the urban areas

1	2
State	**9,757**
Thanjavur	1,867
South Arcot	1,667
Tirunelveli	1,610
Tiruchirapalli	1,482
Ramanathapuram	1,296
Chingleput	1,290
Nilgiri	308
Kanyakumari	237

According to the definition, any person engaged in unpaid household duties will fall under this category. This has resulted in a difference in interpretation. In some places, some males have been recorded under this group. Even among the different States in India the numbers vary from Nil in Kerala to 29,011 in Rajasthan. In the rural areas, the proportion of males under this group exceeds that of urban by 0.3%. In the rural areas of Coimbatore, Chingleput, South Arcot and Nilgiri the males included under this group form comparatively a high proportion of the total non-workers ; 2.6%, 1.9%, 1.1% and 1.3% respectively. This can be attributed to the literal interpretation of the instruction by the enumerators. They have included unemployed persons who do odd jobs for the family like going to the market or to the shop under the category of house-wife. Actually some of them are engaged in *Vittu Velai* (domestic work) which cannot be distinguished from what the female in the house does. The return in the rural areas is more than 3 times that in the urban area.

Dependents, infants and disabled

62. 44.6% of males and 28.8% of females belong to the category of dependents, infants, children not attending school and persons permanently disabled. No large scale variation from district to district is observed. In Nilgiri among females the proportion is high (37.2%) but it does not exceed the State average by more than 33%.

Retired persons, rentiers and dividend receivers

63. 4.7% of males and 1.5% of females belong to the group of retired persons, rentiers, persons living on agricultural or non-agricultural royalty, rent or dividend. Females form 2.7% in rural areas. The districts which have a proportion above or below 33% of the State average are shown in the following table.

TABLE V - 57

Percentage of retired persons, rentiers, dividend or royalty receivers to total male and female non-workers separately

	Males	Females
1	2	3
State	**4.7**	**1.5**
Ramanathapuram	...	A 2.4
Tirunelveli	...	A 2.2
Nilgiri	B 2.4	...
Madras	...	B 0.4
Kanyakumari	...	B 0.9

A—Above average. B—Below average.

In Thanjavur many land owners are found who cultivate vast areas of land and live on rents or dividends received from it.

Beggars and vagrants

64. The proportion of beggars, vagrants etc., in the urban areas is 0.5% among males and 0.2% among females as against 0.2% for males and 0.1% for females in rural areas. The districts which have 33% above or below that of the State average are given below :—

TABLE V - 58

Percentage of beggars, vagrants etc., to total non-workers in the urban areas

		Males		Females
1		2		3
State		**0.5%**		**0.2%**
Thanjavur	A	1.4%	A	0.5%
Kanyakumari	A	1.2%	A	0.4%
Coimbatore	A	0.7%		...
Madras	B	0.2%	B	0.1%
Nilgiri	B	0.2%	B	0.1%
Chingleput		...	B	0.1%
Ramanathapuram		...	B	0.1%

A—Above State average. B—Below State average.

Out of the total beggars of 23,414 males and 16,356 females in the State, 49.6% of males and 40.3% females live in urban areas. 39.3% of the beggars belong to the age-group 35-59. In the urban and rural areas, higher proportion of beggars is found in the age-group 35–59 ; 44.4% of males and 41.1% of females in urban sector and 39.4% of males and 32.0% of females in rural sector. The next higher proportion is found only in the age-group 15-34 in urban sector. The high proportion of beggars and vagrants in the age-groups 35-59 and 15-34 shows the natural tendency for persons to prefer an easy manner of living as begging has a religious tinge in this country. It is unfortunate that many beggars are found in the lowest age-group 0-14.

Inmates of institutions

65. 0.6% of male non-workers and 0.1% of female non-workers belong to the category of inmates of penal, mental and charitable institutions. In the case of males, the proportion is higher than that of 33% of the State average in North Arcot, Madras, and Salem and below 33% in Chingleput, South Arcot, Coimbatore, Nilgiri, Tiruchirapalli, Ramanathapuram, Tirunelveli and Kanyakumari.

TABLE V - 59

Proportion of male inmates of penal and mental institutions to total male non-workers in urban areas

1		2
State		**0.6%**
North Arcot	A	2.0%
Madras	A	1.0%
Salem	A	1.0%
South Arcot	B	0.3%
Chingleput	B	0.2%
Tirunelveli	B	0.2%
Kanyakumari	B	0.2%
Coimbatore	B	0.1%
Nilgiri	B	0.1%
Tiruchirapalli	B	0.1%
Ramanathapuram	B	0.1%

A—Above average. B—Below average.

The unemployed

66. In the urban sector, 3.1% of the male non-workers seek employment for the first time, 1.4% seek re-employment. Females who seek employment form only 0.1% of non-workers and females seeking re-employment is less than 0.1%. Madras is the only district in which the proportion of males seeking employment is higher than 33% of the State average. The districts in which the proportion falls above or below 33% of the State average are given below :

TABLE V - 60

	Proportion of males and females seeking employment for first time to total male and female non - workers				Proportion of males once employed and now unemployed and seeking work to total male non - workers	
	Males		Females		Males	
1	2		3		4	
State		**3.1**		**0.1**		**1.4**
Madras	A	4.4	A	0.2	A	2.2
Salem	B	2.0	A	0.3	B	0.8
Kanyakumari		...	A	0.4		...
Chingleput		...	A	0.2		...
South Arcot		...		...	B	0.8

A—Above average. B—Below average.

In Madras State 95,753 males and 6,775 females were in search of employment for the first time, and 39,144 males and 2,080 females were in search of re-employment. Out of the never employed males and females in the State 69.4% and 70.8% respectively are in urban areas. 74.7%

of males seeking re-employment and 74.8% of females seeking re-employment are found in the urban areas. Madras accounts for one fifth of the never employed males and females in the State (rural & urban). Madurai has the next proportion of 7.4% of never employed males and Coimbatore 5.9% of never employed females. Among the unemployed persons in search of re-employment, Madras has one fourth of the total of such people both among males and females. Madurai has 7.2% of males and 10.1% of females. The percentage of persons never employed and unemployed to total population and total non-workers in the 9 cities of the State are exhibited in the table below:

TABLE V-61

Percentage of never employed and unemployed persons to total population and total non-workers in the cities

City		Never employed		Unemployed	
		Percentage to total population	Percentage to total non-workers	Percentage to total population	Percentage to total non-workers
1		2	3	4	5
Madras	(M.C.)	1.2	1.7	0.6	0.9
Vellore	(T.G.)	0.8	1.1	0.3	0.5
Salem	(M)	0.6	0.9	0.2	0.4
Coimbatore	(M)	1.0	1.5	0.4	0.7
Madurai	(M)	1.1	1.5	0.3	0.5
Tiruchirapalli	(M)	1.0	1.5	0.3	0.4
Thanjavur	(M)	1.1	1.6	0.4	0.5
Tuticorin	(T.G.)	0.8	1.2	0.4	0.6
Nagercoil	(M)	0.9	1.3	0.3	0.4

It is seen that only in Madras, Coimbatore, Madurai, Tiruchirapalli and Thanjavur, the never employed form 1% of the total population. The proportions in other cities are less. In terms of absolute numbers, only in Madras City, the never employed number 20,815 while in all other cities except Madurai it is less than 3,000. In Vellore town-group and Nagercoil, it is even less than 1,000. In the case of persons once employed and now out of employment, only in Madras City there are 10,307 persons while in Madurai and Coimbatore the number is less than 1,500 and in other cities it is even less than 1,000. The greater number in Madras may be due to the migration of persons in search of good posts in the City. The number of persons seeking employment for the first time and employed before but now out of work and seeking employment by broad age-groups is given below:

TABLE V-62

Persons seeking employment for the first time by broad age-groups in the 9 cities of the State

City	Total			0–14		15–34		35–59		60 & over		Age not stated	
	Persons	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Madras (M.C.)	20,815	19,270	1,545	184	4	17,701	1,501	1,300	37	80	3	5	...
2. Vellore (T.G.)	929	890	39	...	...	854	39	36	...	...	...	...	...
3. Salem (M)	1,442	1,379	63	...	...	1,339	63	40	...	...	...	...	...
4. Coimbatore (M)	2,845	2,595	250	251	...	2,212	249	130	1	2	...	...	...
5. Madurai (M)	4,521	4,397	124	84	...	3,905	123	397	1	11	...	...	...
6. Tiruchirapalli (M)	2,510	2,364	146	50	2	2,224	140	88	4	2	...	...	...
7. Thanjavur (M)	1,203	1,135	68	49	1	1,048	66	37	1	1	...	...	...
8. Tuticorin (T.G.)	1,059	993	66	99	...	853	66	41	...	...	...	...	...
9. Nagercoil (M)	939	791	148	54	1	707	146	26	1	4	...	...	...

TABLE V - 63

Persons employed before and seeking employment by broad age-groups in the 9 cities of the State

City	Total			0–14		15–34		35–59		60 & over		Age not stated	
	Persons	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Madras (M.C.)	10,307	9,767	540	38	...	5,943	435	3,357	75	428	30	1	...
2. Vellore (T.G.)	376	373	3	...	...	203	3	159	...	11	...	...	...
3. Salem (M)	571	566	5	...	...	391	5	156	...	19	...	...	...
4. Coimbatore (M)	1,251	1,183	68	104	...	657	54	375	13	47	1	...	...
5. Madurai (M)	1,372	1,263	109	19	...	846	105	389	4	9	...	...	...
6. Tiruchirapalli (M)	763	743	20	5	1	446	16	267	3	25	...	...	...
7. Thanjavur (M)	410	390	20	11	...	268	20	110	...	1	...	...	...
8. Tuticorin (T.G.)	533	502	31	19	5	260	22	196	4	27	...	...	...
9. Nagercoil (M)	312	299	13	4	...	177	13	107	...	11	...	...	...

In all the cities of the State, more than 80% of the persons seeking employment for the first time are males. More than 90% are males among persons seeking re-employment. More than 90% of never employed females in all the cities belong to the age-group 15-34. Only in Madras City 3,357 males in the age-group 35-59 seek employment again after having been once employed. In all other cities they form less than 400. Most of the persons find some permanent work before 30 and persons in the age-group 35-59 do not normally seek other avenues of employment.

Unemployed by age-groups and educational levels

67. Persons seeking employment for different age-groups are given below. In the age-group 15-19, 23,862 males and 2,169 females seek employment for the first time. 3,811 males and 395 females seek employment once again.

For the age-group 25-34, the corresponding figures are 10,835 males and 595 females for those seeking employment for the first time and 7,389 males and 313 females for the unemployed category. The decrease of persons seeking employment for the first time with the increase in age-group is only natural. Persons seeking re-employment increases from the age-group 15-19 to 20-24, reaches the highest proportion in the age-group 25-34, declines again in the age-group 35-44 and decreases still further with the increase in age-group. This is a natural trend because as age advances, men do not seek fresh avenues of appointment. The highest proportion is found in the age-group 25-34.

Among the mere literates and those who are Primary or Junior Basic qualified in this age-group the highest number of males are found in the category of persons once employed and now out of employment. In the level of Matric or Higher Secondary, the highest number of females is found in the category of Never employed. Among illiterate females, the number of persons seeking employment again exceeds the number of persons seeking employment for the first time. In all age-groups, the proportion of illiterate females in search of employment again are much higher than those of the persons seeking employment for the first time. Generally illiterate females of urban areas work as servant maids or coolies. It is often possible that there is a break in their employment. 8,887 males of 20-24 age-group who are qualified upto Primary or Junior Basic level are seeking employment for the first time. They constitute about one third of the total never employed who are qualified upto Primary level. Such a high figure of unemployment in the age-group 20-24 in the urban areas, suggests that they have been in search of employment for nearly four to five years. Among Matric qualified males seeking employment for the first time, nearly half belong to 20-24 age-group. This has to be considered a high figure as persons get qualified for Matriculation standard by 16 years. Among Primary qualified persons seeking re-employment, 25-34 age-group males form about one-third of the total unemployed in that educational level. It shows that there is a time lag in the settlement of males.

In certain educational qualifications, the proportion of unemployed falls cosiderably with the increase in age-group. Out of the 20-24 age-group males and females in search of employment for the first time, 37% among males and 52% among females have Matric or Higher Secondary qualification. In the age-group 25-29, the corresponding proportions are 27% and 38% respectively. The proportion of University degree holders among the males seeking employment for the first time of 25-29 age-group is 4.7%. It falls to 2.6% in the age-group 30-34 and 1.3% in the age-group 35 and above. The corresponding proportion for females in 25-29 age-group is 8.8% which falls to 1.3% in age-groups 30-34 and 35+. Generally girls tend to get married before 30 years and they settle as house-wives and do not seek employment. In the case of 30-34 age-group, the proportion of female Technical degree holders is 5.2% as against 2.5% in the age-group 25-29, but it falls to 1.4% in 35+ age-group. Most of the female Technical degree holders in search of employment for the first time hold degrees in Medicine and Teaching. Hence a high proportion is found in 30-34 age-group. In the case of persons seeking employment for the first time, in the age-groups 35+, mere literates and illiterates form a considerable proportion. This is the case also of persons seeking re-employment.

Among the 20-24 age-group females in search of re-employment, Matriculates form 48%; in the

age-group 25-34, 28%; and in the age-group 35-44, 13%. Technical diploma holders form 0.3% in the age-group 25–34. In the age-group 35–44 they form 0.9%. This increase is due to the women who take diploma in sewing, shorthand and typewriting. Generally as age increases the proportion of unemployed and never employed increases only in the case of illiterates and mere literates. The proportion in all other educational levels decreases with the increase in age-group. In Madras City 1,380 forming 7.2% of the total males seeking employment for the first time are in the age-group 35+. The number of males increases in the age-group 35+ from that of 30–34 in Madras City, North Arcot, Madurai, Tiruchirapalli, Tirunelveli, Ramanathapuram and Kanyakumari.

Workers other than at cultivation by educational levels and occupational groups

68. Among the total literate workers in each division of occupation, literates without educational level is higher in the fourth division which consists of hunters, farm workers, fishermen, log cutters and other forest workers (77.8% of males and 83.8% of females). Among clerical workers, Matrics form the highest proportion (44.6% for males and 72.3% for females), both as compared to all kinds of occupational divisions and as compared to other educational levels in the occupational class of clerical workers. The minimum educational qualification for Government servants is Matriculation.

University Degree holders form only one tenth of male and female workers among the executive and administrative officials. Among females working as professional and technical persons, only 3.2% of females are University degree holders and 1.7% are Technical degree holders in medicine and 4.3% in teaching. Even in the occupational division of technical, professional and related workers, only in Madras, South Arcot, Coimbatore, Tiruchirapalli and Kanyakumari, one tenth of male workers and one twentieth of female workers are Technical degree holders.

Among transport and communication workers, female Matrics form the highest proportion(68.9%) whereas among men, majority of this class of workers are mere literates (49.3%) and Primary or Junior Basic qualified, (33.6%). The reason for this is that while men are engaged in all kinds of occupation in the transport and communication service, females are engaged mostly as Telephone Operators and Receptionists which require higher educational qualification.

Linguistic composition

69. Telugu, Kannada, Urdu, Malayalam, Saurashtra, Badaga, Marathi, Hindi and English are the languages other than Tamil recorded as mother-tongue in large numbers. Telugu is the mother-tongue of Naidus and Chettiars. One-tenth of Madras City's population have Telugu as mother-tongue. This cannot be compared with the figures of migrants from Andhra Pradesh, because there is a considerable section of population permanently residing in Madras State who have Telugu as their mother-tongue. Tamil is the subsidiary language of 66% of the Telugu speaking people. The total number of speakers in each language of the State other than Tamil which has recorded considerable numbers is given below:

TABLE V - 64

Persons speaking predominant mother-tongues in the State

Mother-tongue	Speakers
1	2
Telugu	3,363,579
Kannada	853,211
Urdu	615,503
Malayalam	399,206
Saurashtra	155,392
Badaga	85,371
Marathi	51,431
Hindi	38,974
English	34,446

Out of these, only Malayalam can be compared with the number of migrants. The total migrants from Kerala is 276,518 and the total number of persons whose mother-tongue is Malayalam comes to 399,206. Hindi is the State language of Madhya Pradesh, Bihar, Delhi, Uttar Pradesh and Rajasthan. The total migrants from these States amount to 19,694 while the total Hindi speakers are 38,974. The mother-tongue of Muslims is

Urdu and 1,560,414 Muslims are found in the State. But most of them speak Tamil in their homes; in the southern parts of the State, most of the Muslims have Urdu as subsidiary language.

In the case of Saurashtra and English, 96% and 94% respectively are recorded in the urban areas. Saurashtra speakers are mostly found in Madurai city. Anglo-Indians and Europeans who have English as mother-tongue are found in Madras City, and in the urban areas of Coimbatore, Nilgiri and Tiruchirapalli. 51% of the total speakers of English are in Madras City. 80% of Hindi speakers, 68% of Urdu speakers and 68% of Marathi speakers are in urban areas. Among the Malayalam speakers, 56% are in urban areas. Among Telugu and Kannada speakers, more than one-fourth are in urban areas. Only 11% of the Badagas are in urban areas. Most of the Badagas are found in Nilgiri district and they live generally in the rural parts.

More than 40% of the speakers of Hindi are found in Madras City. The number of persons having Hindi as mother-tongue in the southern districts of the State–Madurai, Ramanathapuram, Tirunelveli and Kanyakumari is limited. Among the Marathi speakers, one-fourth are in Madras City. 31% of the persons in the State with Malayalam as mother-tongue are found in Kanyakumari. 15% of persons having Malayalam as mother-tongue are in Madras City, 20% in Coimbatore district and 16% in Nilgiri. It is also found that Telugus are concentrated in harbour areas of Madras City. In Madras City persons with English as mother-tongue are found in large numbers in Periamet, Park Town, Purasawalkam, Kilpauk and Royapettah; Malayalam speaking people in Chetpet, Nungambakkam, Thousand Lights and Urdu speakers and Kannada speakers in the areas of Pudupet, Chepauk, Mirshapet, Azadnagar, Triplicane and Marina.

Again more than 40% of the speakers of Badaga, English, Hindi, Kannada, Marathi, Saurashtra, Urdu and Telugu have Tamil as subsidiary language. The proportions are indicated below:

TABLE V - 65

Percentage of persons speaking Tamil as subsidiary in certain mother-tongues

Mother-tongue	Percentage speaking Tamil as subsidiary
1	2
Badaga	39.8
English	48.9
Hindi	40.5
Kannada	60.5
Malayalam	32.0
Marathi	54.1
Saurashtra	74.1
Telugu	65.6
Urdu	53.0

Three-fourths of the persons having Saurashtra as mother-tongue speak Tamil as subsidiary language. In the case of Malayalam, only 32% have subsidiary language as Tamil. This low percentage may, perhaps be due to the inclusion of Kanyakumari district in the State where many of the persons have Malayalam as their mother-tongue. If we exclude the total number of speakers of Malayalam in Kanyakumari district from the State total, it is seen that 47% of the remaining population whose mother-tongue is Malayalam speak Tamil as subsidiary language.

CHAPTER VI

RURAL POPULATION

Villages in Madras State

Population that is not urban has been classified as rural. Much has been written about the village in India. But from what I see from Census Reports of Madras State, it is a rather illusive concept which has defied precision. Only in 1961 has a scientific definition of urban area been attempted with partial success. It, therefore, follows that village has never been defined in a scientific manner till 1961. Revenue village is something different from what we mean by the term 'village' in Census. Revenue village has been the subject of administrative convenience the boundaries of which are often altered. The village is generally understood as a unit of revenue administration and the word used thus does not necessarily connote material existence or present habitation. There exist numerous villages in which no one now resides. Clubbing and splitting of villages for revenue purposes is an everyday feature of settlement. A revenue village may include one or more residential villages or on the other hand a village to all outward seeming one and indivisible may enjoy a theoretically dissevered existence. As such, a census village is not a residential unit, but the administrative unit which constitutes a convenient charge of a village headman. It is also natural to find villages of different types. The village typical of Deccan fortified upto 160 years ago and still presenting traces of old stone walls and circular watch towers, can be found. Being compelled to live within the fortifications, the people were forced to crowd their square flat roofed houses close together so that in many villages there are only one or two streets wide enough to admit an ordinary cart, the other fortifications being merely tortuous lanes. Villages of this type are found in parts of Salem district. Again, an ordinary village of Madras State will contain 3 or 4 broad streets. These houses will as a rule be substantial buildings of solid masonry with tiled or terraced roofs. Interspersed among these houses will be a shapeless cluster of thatched mud huts in which humbler lead their life. Actually, the greatest difference between the village as an administrative and as a residential unit is observed in the southern districts of the State. In Kanyakumari, the village is entirely different from any other part of the State, except for a few bazaars, the houses are not built in a regular or irregular streets. But each house is located in its compound or garden which is usually thickly planted with areca or coconut, palm, jack trees, plantains, betel and pepper vines and the like. The village here is again an administrative unit which may cover a wide area and may contain a great number of isolated homesteads. It will be worthwhile reproducing the views of Mr. Yeatts on this subject:

"In any country it would be difficult to condense into a formula the attributes of a town and in South India, certainly no hard and fast line exists. The position is further complicated by the fact that the term village used in these statistics does not connote in any sense a normal residential unit. In a ryotwari area such as the greater part of Madras Presidency, the village must for practical purposes coincide with the unit of revenue administration. That may on occasion coincide with a formed habitation unit but need not necessarily do so and in fact rarely does. The ryotwari administrative village is essentially a charge entrusted to certain officers. From this it follows that a village may not even be consistent in itself and villages have in the past frequently varied according to retrenchment or expansion in the staff of village officers ".

As such, a comparative study of villages has little meaning.

"As an example of the wide divergence between the village unit and the unit of rural life there are in the Harur taluk of Salem district only 143 villages; if, however, hamlets are added the number becomes 652. Before the formul could be applied even to this figure, it would b

necessary to examine which of those hamlets should be taken as residential units and which should be clubbed with others or with a parent village to achieve a true residential unit. The typical Madras village consists of a Kasba in which are situated the few shops ; round this at varying distances are small hamlets. Village in these statistics implied therefore an undetermined number of small residential units. For strict comparison of urban and rural conditions, the hamlet should be the rural unit or at any rate the village should be broken up. This division is not possible ".

In spite of the uncertainty of the village as a unit, it has survived in Madras because of the village establishment which, subject to exigencies of administration, has maintained revenue records on the basis of villages as it existed in the past. Actually, the new villages formed by the abolition of Zamindari and Inam estates in Madras State have also been grouped together for purpose of maintenance of records. Thus, a unit exists in this country which unfortunately is not identical with the residential unit useful for enumeration.

Emergence of Panchayats

2. In 1951, the concept of location code was introduced in the State. It meant the disapparance of villages as a unit for purpose of statistics. The panchayats have been formed in Madras State grouping one or more villages or dividing villages. This process has gathered momentum and has reached saturation point by 1961 when this Census was held. Actually, after the completion of 1961 Census, the entire State has been covered by the establishment of panchayats all over the State. The panchayats do not destroy villages as units for maintenance of accounts but for statistical purposes, the panchayats have been adopted as the third element of the location code. Only in cases where panchayats have not been formed has village been adopted as a unit. As such, the bulk of the units comprising the location code consists of 9,707 panchayats, the total number of units being 15,078.

TABLE VI-1

Number of towns, panchayat villages and non-panchayat villages

State/District	Total No. of location code units	Towns			Villages	
		Municipalities, Cantonments & Townships	Panchayats	Non-panchayats	Panchayats	Non-panchayats
1	2	3	4	5	6	7
Madras State	**15,078**	**71**	**262**	**6**	**9,445**	**5,294**
Madras	1	1	...	...	...	...
Chingleput	1,514	5	28	1	923	557
North Arcot	1,729	11	19	...	1,269	430
South Arcot	2,056	4	15	1	1,106	930
Salem	1,629	3	22	...	1,022	582
Coimbatore	960	9	23	2	557	369
Nilgiri	51	3	9	1	34	4
Madurai	921	7	25	...	747	142
Tiruchirapalli	1,452	4	28	1	896	523
Thanjavur	2,058	6	28	...	1,229	795
Ramanathapuram	1,648	8	27	...	995	618
Tirunelveli	1,007	6	38	...	621	342
Kanyakumari	52	4	...	...	46	2

It shows that the panchayat has now become the unit of local administration.

Definition of village

3. I have never defined the village for this Census. Neither has the Board of Revenue, Madras ever done it. Village can mean a group of hamlets, hamlets being a cluster of human habitations from which it is separated by fields, waste lands, ditches or jungles. It can consist of a large number of hamlets of varying sizes with a point of central interest linking them together.

Concepts of revenue village and panchayat

4. I will, at this stage, make an effort to clarify the following concepts which are associated with the administration in Madras State. They are revenue village, panchayat, major panchayat and minor panchayat. During this discussion, it may be of interest to define the jurisdiction of a panchayat and how villages function under major and minor panchayat and the relation which exists between village and hamlet. A revenue village is the smallest unit recognised in revenue administration having definite boundaries which are not statutorily fixed in Madras State, but are fixed by the administrative orders issued by the Government from time to time. The administrative division is as follows: Each district is divided into taluks to be in charge of a Tahsildar. It is further sub-divided into firkas under the control of the Revenue Inspector. Next come the revenue villages which function under the control of the Village Munsiff assisted by the Village Karnam as his accountant. Thus revenue village is a definite area which has been treated as a convenient unit for administration by the ordinary staff of village officers consisting of the Headman, Munsiff, Accountant and certain number of menials. It does not in any sense connote a separate material existence or present habitation. In Madras, revenue village has never been treated as a single collection of villages, but a term denoting a certain well defined area. The extent of the area depends on past history based on administrative convenience at the time of resettlement of a district. It is usual to amalgamate contiguous villages which are too small to have separate village officers and again to sub-divide those which are too large for a single set of officers to manage efficiently. It may sometimes happen that the constitution of the villages will be rechanged even when any retrenchment is considered by the Government as a general policy. Sometimes two villages will be put in charge of one set of village officers. The revenue village generally consists of several detached hamlets, one of which gives its name to the whole revenue village. The number of hamlets attached to each village has never been taken into account. The size of the revenue village can vary from district to district both in area and population. If in a particular district a single Headman is sufficient for over 1,000 persons, a Headman need not be provided for a village with lesser population in another district. The general tendency in the case of ryotwari tracts is towards a village of a large size, but this is modified by the existence in some districts, notably in Chingleput and Thanjavur of mirasi or joint villages, the amalgamation of which with others will be administratively inconvenient. In dry areas, villages would necessarily be larger than in wet areas. The village Accountant has extra items of work in wet areas like irrigation, collection of water rate, imposition of penalties. More crops will be raised in wet areas. Sometimes resettlement has been undertaken in several districts to remove these difficulties. Lastly in Zamindari tracts which previously formed a good proportion of area of the State, the size of the villages depended on long-standing custom, unaffected by rules relating to the revision of village establishment. The tendency in such tracts is to form smaller villages. With the abolition of the Zamindari system, a large scale revision of villages has been undertaken with the result that some of the Zamindari and Estate villages have disappeared. Thus it will be seen that the Census villages generally corresponded with the revenue villages in decades earlier than 1951, but with the evolution of the panchayat system of administration the village has yielded its place to panchayat and is likely to disappear from the Census literature.

Evolution of the institution of panchayats

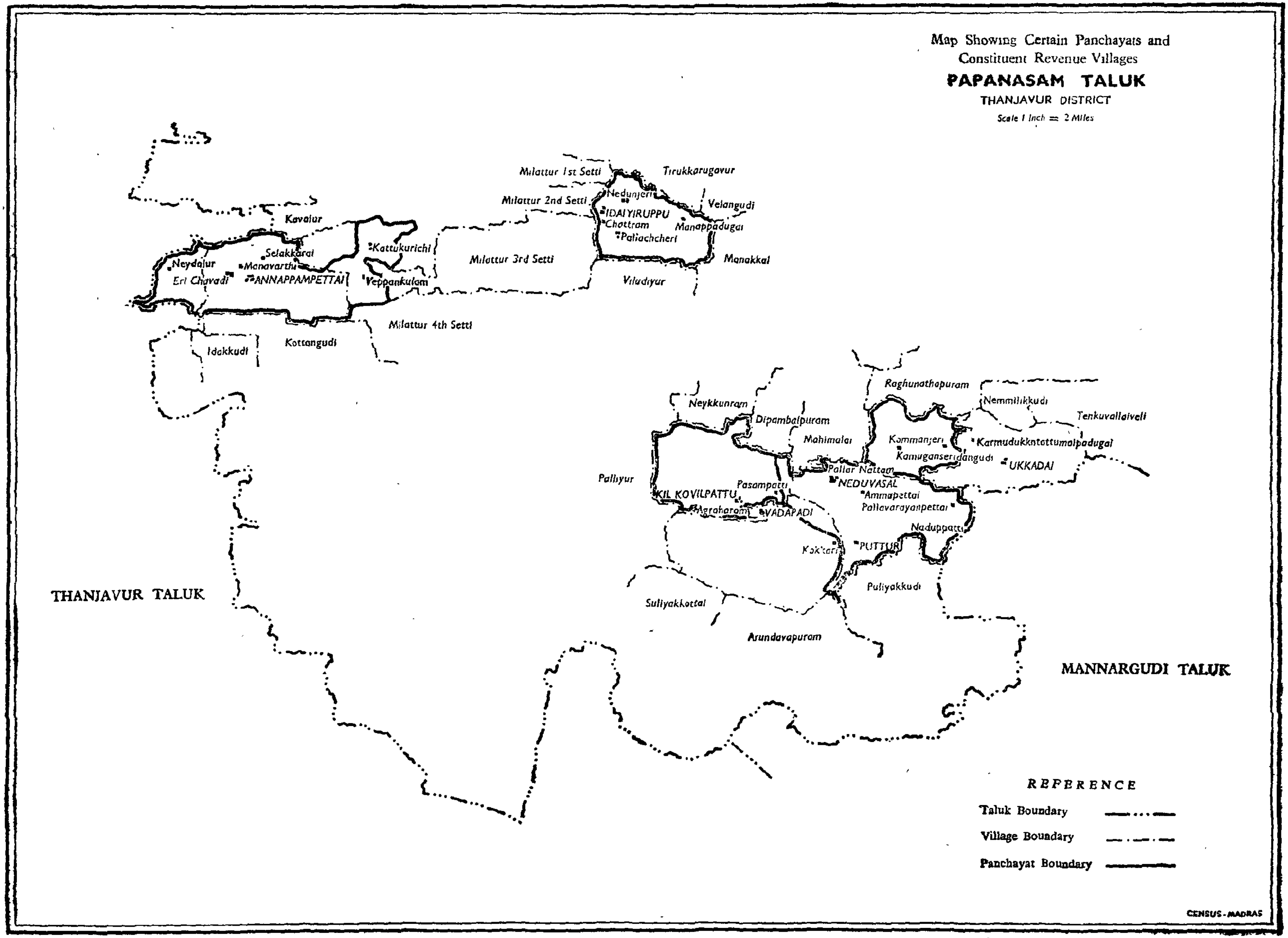
5. In view of the importance of the role of panchayats, it is useful to have an historical retrospect on village panchayats of Madras State. They are not only important as the train-

ing grounds of democracy, but also as units which will in due course assume statistical importance. It is generally assumed that in ancient times village panchayats formed an integral part in the national life of our country. They are deemed to be self-contained economical administrative units functioning like a small republic enjoying a good deal of local autonomy with powers of taxation for local purposes. To what extent this idealistic conception is true to reality, I cannot say, but it is likely that a high degree of self-contained village life has existed in the past. Further till the advent of the British rule in India, the impact felt by the villages of the Central authority was comparatively little except during times of war. The first tendency of the British rule in India was to have a centralised system of administration and a gradual decay of the role of village panchayat was inevitable. Administration of justice was taken over by Civil and Criminal Courts controlled from the Centre and the Police function of the villages was undertaken by a specially created department called Police. Again administration of the land revenue was vested in a separate department of Government. It also accelerated the movement of people from villages to towns with the result that self-reliance which the villagers had, gradually disappeared and the village panchayat as a useful rural institution sunk into insignificance. In their wisdom the British administrators did realise in due course the significant role of village panchayats in India. Montague Chelmsford observed in 1820 that village panchayat would prove an excellent remedy for the imperfection of a bad form of Government. They felt that State should take definite steps to promote among the people the habit of voluntary co-operation in public work. The credit for realising the importance of initiating new measures in that direction goes to Lord Ripon whose resolution of 1882 regarding the association of non-officials in administration of local institutions led to the passing of the Madras Local Boards Act of 1884. It provided for the constitution of unions in small towns and large villages, mainly for looking after village roads, sanitation and lighting. About 400 unions were established, the members of which were all nominated. After the visit of the Royal Commission on Decentralisation, the Government of Madras decided to increase the number of these unions and introduced the principle of election. They also decided to constitute informal panchayats under the control of Collectors with the local Village Headman as ex-officio Chairman. About thousand of these informal panchayats were accordingly constituted, but they had no statutory basis. The next step was taken in 1918 when the Government of India in their review of the working of self-governing institutions pointed out the desirability of keeping panchayats as far as possible under the control of district staff and away from other administrative bodies. They also suggested the association of village officers with panchayats and advocated simple and elastic legislation to bring the panchayats into existence. The Madras Panchayat Act, 1920 was accordingly passed and enforced. It enfranchised men over 25 years of age and provided for election of all members of the panchayat. A post of Registrar General of Panchayats was created to supervise the panchayats and he was aided by the non-official organisers. Side by side with these panchayats, the unions constituted under the Local Boards Act of 1884 and its successor, Madras Local Boards Act of 1920 also continued to function. The principle that panchayat should be placed under the control of the district staff was not accepted at that stage.

By 1928 the number of panchayats increased to 3,000. The Government realising the difficulty experienced by Registrar General to supervise so many village bodies transferred the well established panchayats to the control of the Collectors Before the effect of this change could be gauged, Madras Village Panchayats Act of 1920 was repealed by the Madras Local Boards Amendment Act of 1930. That Act amended the Madras Local Boards Act which was then in force so as to bring within its scope the panchayats constituted under the Village Panchayat Act. The panchayats were thus placed on the same footing as the unions which were already governed by the Local Boards Act and they acquired also considerably enlarged powers. It was found that the condition of panchayats under the dual administration of District Boards on the one hand and on the other of the Inspector of Municipal Councils and Local Boards was generally unsatisfactory. The Madras Village Panchayat Act, 1946 (Act

No. XII of 1946) was accordingly enacted by the Governor General during the Advisers' regime, the question of bringing it into force being left to the Ministry when it resumed office. The aim was to exclude panchayats from the scope of Madras Local Boards Act, 1920 by framing a separate enactment and to place them under the District Collectors. The Ministry was, however, of the view that in order to make the panchayats really democratic institutions, control and supervision should be vested in Inspector of Local Boards and the control of District Collectors over the panchayat should be limited to certain emergency powers and panchayats should be vested with more powers. Madras Panchayat Act, 1946 was therefore allowed to lapse in 1948. The next step was the enactment of the Madras Village Panchayat Act, 1950 enforced with effect from 1st April, 1951. This is in implementation of the Article 40 of the Constitution which has enjoined that the State shall take steps to organise panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government. Under this Act, every village or hamlet with a population of 500 and above will have a panchayat. Village with a population of less than 500 will be included within the jurisdiction of an adjoining panchayat or grouped with other contiguous villages to form a panchayat. The Act enjoins on panchayats certain obligatory functions such as construction and maintenance of public roads, lighting of street lights and public place, construction of drains, cleansing of streets, removal of rubbish, provision of protected water supply etc. Discretionary functions include planting and preservation of trees on road margin, opening and maintenance of elementary schools, reading rooms and public market. The work of village courts and panchayat courts under the Madras Village Court Act, 1888 was also entrusted to village panchayats within their respective areas, civil jurisdiction having been incrased to Rs. 100. The main revenue for the panchayat was derived from the share of the land cess realised in the village. Government also made ex-gratia grants. Government had supervision and control over village panchayats through the Inspector of Local Boards. The District Boards had no control over panchayats. They performed village panchayat function in non-panchayat areas until panchayats were constituted. The District Collectors did not have any control over panchayats except for certain emergency powers in ensuring safety of life and property and for breach of peace.

With the impact of the Community Development Programme, the Government of Madras embarked on a new programme of development of panchayat administration. For this purpose a new act—Madras Panchayat Act, 1958—was enacted. Accordingly a three year programme of the introduction of new Madras Panchayat Act was drawn up for every district. The entire rural area has been divided into development blocks for operating National Extension Service Scheme. These blocks were grouped in three batches. The Act was introduced in each batch of blocks during each of the next three years—1959-60, 1960-61 and 1961-62. With the introduction of the new Act in each development block, it became a district development block under the new Act with new set-up of panchayat administration installed therein. The old Panchayat Act and District Boards Act which provided statutory basis for the present set-up of local administration in rural areas ceased to be in force. With the third year of the III Five Year Plan period, the new set-up of panchayat organisation covering the entire State has been implemented. The following categories of local areas are excluded from panchayats—City of Madras, municipal towns, cantonments and three township areas. The entire territory of Madras State with the exception of these excluded areas have been divided into 358 Panchayat Development Blocks. They vary in size and population. From out of the territory comprising each block, certain localities will be classified as panchayat towns. They are localities with not less than 5,000 population and a normal annual income of not less than Rs. 10,000/-. Such localities were few, one or two in a block. These are the major panchayats under the 1950 Act. A special provision has been made in the Act for classification of a locality as a township under the Panchayat Act. This provision is intended for use when there is industrial labour or institutional colony or a health resort for which normal financial arrangements of either a panchayat town or a panchayat village will be unsuitable. The entire area of a pancha-


Map Showing Certain Panchayats and Constituent Revenue Villages
PAPANASAM TALUK
THANJAVUR DISTRICT
Scale 1 Inch = 2 Miles
THANJAVUR TALUK
MANNARGUDI TALUK
Kavalur
Neydalur
Eri Chavadi
Selakkarai
Manavarthi
ANNAPPAMPETTAI
Kattukurichi
Veppankulam
Idakkudi
Kottangudi
Milattur 4th Setti
Milattur 3rd Setti
Milattur 2nd Setti
Milattur 1st Setti
Nedunjeri
IDAIYIRUPPU
Chottram
Paliachcheri
Tirukkarugavur
Velangudi
Manappadugai
Manakkal
Viludiyur
Neykkunram
Dipambalpuram
Mahimalai
Raghunathapuram
Nemmilikkudi
Tenkuvallaiveli
Kommanjeri
Karmudukkntottumalpadugal
Kamuganseridangudi
UKKADAI
Pallar Nattam
NEDUVASAL
Ammapettai
Pallavarayanpettai
Pasampatti
KIL KOVILPATTU
Agraharam
VADAPADI
Naduppatti
Kokkari
PUTTUR
Puliyakkudi
Palliyur
Suliyakkottai
Arundavapuram
REFERENCE
Taluk Boundary
Village Boundary
Panchayat Boundary
CENSUS - MADRAS

yat development block excluding those classified as a panchayat town or township have been sub-divided into panchayat villages. The panchayat village can be, but need not necessarily be identical with a revenue village. The provision for the delimitation of panchayat villages is flexible subject to the only condition that no panchayat village can have a smaller population than 500. As a matter of administrative policy, no panchayat village can be delimited with a smaller population than 1,000 unless it can be shown to the satisfaction of the Government that such delimitation cannot be avoided. Subject to this limit, the convenience and wishes of the local people have been respected in delimiting panchayat villages. For every panchayat village, a village panchayat has been set up and for every panchayat town, a town panchayat has been set up. For the panchayat development block as a whole, there is to be a panchayat union of which the governing body will be known as the Panchayat Union Council. These village panchayats and town panchayats are the local units of federal structure of organisation of panchayat administration while the panchayat union is to be the apex of this organisation. This set-up is somewhat different from that of the normal administrative machinery with taluks, municipalities and villages forming the administrative units. One essential difference between the two set-ups as far as Madras State is concerned is that the Panchayat is formed on a statutory basis. Somewhat typical cases of the formation of panchayats are indicated below:

a) A Panchayat may be formed by a single village with its attached hamlets as in the case of Edaiyiruppu (P) of Papanasam Taluk of Thanjavur district.

		Components	
71.	Edaiyiruppu (P)	Edaiyiruppu	(V)
		Nedunjeri	(H)
		Manapadugai	(H)

b) It may also consist of two or more villages as in the case of Annappanpettai (P) of the same taluk.

		Components	
73.	Annappanpettai (P)	Neidalur	(V)
		Annappanpettai	(V)
		Selakkarai	(H)
		Manavarthi	(H)
		Kattukurichi	(V)
		Vettapathi	(H)
		Veppankulam	(H)

c) A Panchayat may also consist of one village and parts of one or more revenue villages as in the case of Ammapettai (P) of the same taluk:

		Components	
125.	Ammapettai(P)	Keelakoilpathu	(V) (Part)
		Vadapathi	(V) (Part)
		Neduvasal	(V) (Part)
		Puthur	(V)
		Pallavarayanpettai	(H)
		Nedupatti	(H)
		Therkumangalam	(H)

d) The portions not included in the above panchayat are formed into separate panchayats with their hamlets which represent cases of parts of revenue villages constituted as separate panchayats.

(i)	Keelakoilpathu (P)	Keelakoilpathu	(V) (Part)
		Melakoilpathu	(H)
		Maravadi	(H)
		Pasumpadi	(H)
		Udayarthottam	(H)
(ii)	Neduvasal (P)	Neduvasal	(V) (Part)
		Kommancheri	(H)
		Kambanthangudi	(H)
(iii)	Vadapathi (P)	Vadapathi	(V) (Part)
		Thenpathi	(H)
		Kokkarai	(H)

A map of certain panchayats with the boundaries of revenue villages comprising the panchayat is printed separately which will explain the relationship between them.

Till the Act of 1958, panchayats and revenue villages have functioned in separate compartments. Some co-ordination now exists between the villages and the panchayats which is indicated below;

Under the Panchayat Act of 1958, Karnams (Village Accountants) have been designated as Secretaries of Panchayats. The panchayats and Panchayat Unions have a number of statutory and discretionary developmental functions under *Sections 64 to 66 of the Madras Panchayat Act*, 1958. The Act has provided for the provision of adequate finance for discharging their responsibility. The main sources of income for the panchayats are—local cess, local cess surcharge, house-tax, profession-tax, vehicle-tax and land revenue assignment (vide Section 115 to 124 of the Madras Panchayat Act, 1958). Under Section 126 of the Act, it is the duty of the village officers to collect taxes on behalf of the panchayat. Village Accountants help the President to arrive at the total demand of the panchayat. On the basis of the account furnished by the President, the Village Munsiff collects taxes. Thus a co-ordinated effort of the Village Accountant, Village Munsiff and the President is necessary for the provision of adequate finance to the Panchayat. The village officers are also paid additional remuneration for the work. The coercive process for the collection of arrears can be initiated only by the President of the panchayat who has also been given the powers to write off irrecoverable arrears (Section 127 of the Madras Panchayat Act, 1958).

The developmental activities have also been made the responsibility of the panchayats and Panchayat Unions. They may need large extents of land for the discharge of these responsibilities. To facilitate this, the Act has transferred Government land to the panchayat, under Section 86 of the Madras Panchayat Act, 1958. Demarcation and proper utilisation of public land is done by the President with the assistance of Village Accountant. The fruit-bearing and fuel trees in the villages and unreserved forests have also been transferred to the control of the panchayats, so that income from these will accrue to them (Section 72 of the Madras Panchayat Act, 1958). Minor irrigation sources are also vested in the Panchayat Unions (Sections 84 and 85 of the Madras Panchayat Act, 1958). Repairs and maintenance of minor irrigation sources have been made the responsibility of the panchayat though irrigation still remains within the exclusive field of the Revenue Department. Several other rights regarding sale of fishery, quarrying, maintenance of roads, maintenance of unreserved forests have also been made the joint responsibility of the village panchayats and village officers. Thus it will be seen that in the revised set-up, the autonomy of the village establishment has been to a large extent destroyed and the panchayats have been given greater responsibilities and powers over the villagers, so that proper development could take place. As such, it is clear that in any future set-up, the role of panchayat is of greater significance than that of the villages.

Hamlets are tiny settlements scattered around the main village site, usually inhabited by a group of persons belonging to a particular caste or community. In certain villages they may be near to each other, but in others they may be situated at quite a distance from the main village. The existence of the hamlets does not affect the functioning of the panchayat or the constitution of the revenue villages. It may so happen that a revenue village does not have any hamlet at all. Thus hamlets in the rural set-up of Madras State do not have specific significance which is associated with a village, viz., that it is a self-contained unit. It may, however, be of interest to a Sociologist to study the pattern of hamlets in Madras State.

Number of villages and population per inhabited village in the States of India

6. From the foregoing discussion, it will be clear that no proper comparison of the village data can be made. A village in the local sense used administratively or for revenue purpose has not been finally recognised and tabulated in this Census. What has been adopted is the local administrative unit called 'Panchayat' which can sometimes coincide with the boundaries of the village. With the development of Panchayat Raj and with the abridgement of distances separating the different villages and with the extension of urban facilities which are more easily available, the concept of the village as understood from the previous Censuses and in the literature of the country is bound to disappear in course of time. Let me illustrate this with the help of a table giving the number of villages and the average number of persons per inhabited village in the States of India.

TABLE VI-2

Number of villages (inhabited and uninhabited) and the average number of persons per inhabited village in the States of India, 1961

Name of State	No. of Villages Uninhabited	No. of Villages Inhabited	Average No. of persons per inhabited village
1	2	3	4
1. Andhra Pradesh	1,913	27,084	1,097
2. Assam	1,565	25,702	426
3. Bihar	10,428	67,665	629
4. Gujarat	433	18,584	824
5. Jammu & Kashmir	167	6,559	452
6. Kerala	2	1,573	9,122
7. Madhya Pradesh	6,429	70,414	394
8. Madras	615	14,124	1,749
9. Maharashtra	3,016	35,851	792
10. Mysore	2,972	26,377	695
11. Orissa	5,659	46,466	354
12. Punjab	1,405	21,269	763
13. Rajasthan	2,285	32,241	523
14. Uttar Pradesh	12,720	112,624	571
15. West Bengal	3,486	38,465	686

With the exception of Kerala, which has no village system in the strict sense of the word, Madras has the highest number of persons per inhabited village, viz. 1,749. In Kerala, it is much higher, i.e. 9,122. Madras is followed by Andhra Pradesh with 1,097; all other States have less than 1,000 persons per village, the lowest being 354 in Orissa. In general, South Indian States have bigger villages than North India.

Persons per inhabited village in the districts

7. Uninhabited village is a local unit in which no persons live. 615 villages are found in Madras State out of a total of 14,739. The following table gives the distribution of uninhabited and inhabited villages and number of persons per inhabited village in the districts of Madras State.

TABLE VI-3

Number of villages (inhabited and uninhabited) and the average number of persons per inhabited village in each district of the State, 1961

State/ District	Number of Villages Uninhabited	Number of Villages Inhabited	Average No. of persons per inhabited village
1	2	3	4
Madras State	**615**	**14,124**	**1,749**
Chingleput	40	1,440	1,209
North Arcot	18	1,681	1,496
South Arcot	31	2,005	1,325
Salem	101	1,503	2,120
Coimbatore	29	897	2,815
Nilgiri	1	37	6,201
Madurai	14	875	2,509
Tiruchirapalli	14	1,405	1,788
Thanjavur	125	1,899	1,361
Ramanathapuram	186	1,427	1,277
Tirunelveli	54	909	2,071
Kanyakumari	2	46	18,409

The maximum number of uninhabited villages is found in Ramanathapuram district. The uninhabited units are generally reserved forests which are treated as village units for certain purposes. It has only a legal existence. Indian Census has always adopted legally constituted units for enumeration. Firstly, it is because the data collected by us should be useful for revenue and administrative purposes. Again, whatever data are collected should be correlated to the revenue records maintained in the State. Thirdly, it is necessary to adopt what can be easily understood to see that no area is duplicated or missed. In Madras State, Land Revenue records have been maintained in a highly efficient manner with the result that each unit has a definite habitation and its boundaries are well defined. A complete coverage of the entire area is rendered possible by adopting what exists in the form of Panchayat villages and other units.

Number of villages, 1901-61

8. A statement showing the number of villages '*uninhabited and inhabited*' in the State for the period 1901 to 1961 is given below:

TABLE VI - 4

Number of villages (inhabited and uninhabited) in the State, 1901–1961

State and District	1961		1951		Inhabited				
	Uninhabited	Inhabited	Uninhabited	Inhabited	1941	1931	1921	1911	1901
1	2	3	4	5	6	7	8	9	10
Madras State	**615**	**14,124**	**1,406**	**18,470**	**18,712**	**20,139**	**20,784**	**21,530**	**24,677**
Chingleput	40	1,440	120	1,917	2,169	2,138	2,129	2,141	2,144
North Arcot	18	1,681	48	1,805	1,993	1,998	2,246	2,308	3,912
South Arcot	31	2,005	11	2,244	2,325	2,315	2,333	2,340	2,745
Salem	101	1,503	93	1,786	1,793	1,782	2,293	2,247	3,782
Coimbatore	29	897	23	995	1,080	1,103	1,096	1,337	1,435
Nilgiri	1	37	...	46	54	53	54	54	48
Madurai	14	875	67	1,076	1,058	1,066	1,057	1,097	4,113
Tiruchirapalli*	14	1,405	42	1,481	1,486	1,486	1,478	1,802	1,309
Thanjavur	125	1,899	144	2,251	2,413	2,511	2,510	2,508	2,510
Ramanathapuram	186	1,427	769	2,787	2,237	3,565	3,505	3,386	@
Tirunelveli †	54	909	50	1,017	1,016	1,015	1,007	1,189	1,529
Kanyakumari	2	46	39	1,065	1,088	1,107	1,076	1,121	1,150

@ Ramanathapuram district was formed only after 1901.

* Includes the villages of former Pudukottai State.

† Includes the villages of Shencottah taluk transferred from Quilon district of former Travancore-Cochin State.

The village in the Census Statistics is not a sociological unit but *merely a panchayat; and* wherever panchayats have not been formed, a revenue village which the authorities have arranged as constituting a convenient unit for administration. It is not the residence of the village community, as land is not held by all the people in common. The boundaries of the village can be altered when a district is surveyed. No conclusion worthwhile can be drawn from comparisons of the number of villages existing in different areas nor are the characteristics of villages uniform in all districts. The walled and fortified villages of some parts of Salem in no way resembles the scattered habitations of South and East Coast divisions and other hill tracts. Almost all the larger villages have a greater or smaller number of outlying hamlets attached to them, but in the returns, the population of these is included in that of the parent village. In this Census, the term village refers to all panchayats, not treated as towns and other non-panchayats treated as villages in revenue administration. By 1971, the village will become identical with the panchayat.

The total number of inhabited villages as *recorded has appreciably fallen in numbers in the* course of the last 60 years. It fell from 24,677 to 21,530 during the period 1901-11. From 1911 to 1951, the fall was less marked being the order of about 3,000 villages. A sharp fall has been recorded during the period 1951—61 from 18,470 to 14,124. *In the light of the discussion in the* previous paragraphs no reason need be given except to say that the formation of panchayats has been accelerated during the period 1951—61. The fact that one or more villages are grouped together to form panchayats is a sufficient explanation for the progressive fall in the number of village units in Madras State.

Population residing in villages classified by population in the major States

9. It is still possible to compare the rural population. Also a comparison can be made of people living in different population groups. Table VI-5 gives the distribution of 10,000 rural population in villages of different sizes among the major States of India.

TABLE VI - 5

Proportion of 10,000 persons in each State residing in villages classified according to population, 1961

Name of State	Proportion of 10,000 persons residing in villages inhabited by						
	Less than 200	200-499	500-999	1,000-1,999	2,000-4,999	5,000-9,999	10,000 & over
1	2	3	4	5	6	7	8
1. Andhra Pradesh	175	562	1,433	2,890	3,845	981	114
2. Assam	951	2,395	3,184	2,419	982	69	...
3. Bihar	517	1,644	2,278	2,469	2,284	677	131
4. Gujarat	237	1,188	2,481	2,945	2,512	581	56
5. Jammu & Kashmir	825	2,567	3,101	2,398	995	114	...
6. Kerala	N	1	10	60	1,030	2,888	6,011
7. Madhya Pradesh	1,001	3,177	3,159	1,817	787	59	...
8. Madras	33	182	983	2,769	4,252	1,173	608

TABLE VI - 5 (Contd.)

Proportion of 10,000 persons in each State residing in villages classified according to population, 1961

Name of State	Proportion of 10,000 persons residing in villages inhabited by						
	Less than 200	200–499	500–999	1,000–1,999	2,000–4,999	5,000–9,999	10,000 & over
1	2	3	4	5	6	7	8
9. Maharashtra	246	1,256	2,571	2,855	2,240	704	128
10. Mysore	354	1,569	2,487	2,780	2,212	598	...
11. Orissa	1,218	2,948	3,030	2,024	725	55	...
12. Punjab	282	1,248	2,347	2,954	2,521	549	99
13. Rajasthan	662	2,208	2,730	2,356	1,689	355	...
14. Uttar Pradesh	525	1,918	2,845	2,693	1,662	312	45
15. West Bengal	412	1,512	2,287	2,725	2,347	585	132

N denotes Negligible.

In Madras, the maximum number of people, 4,252 is living in the group 2,000–4,999. In Kerala 6,011 live in villages of more than 10,000. The pattern of Madras is followed by Andhra Pradesh. In the case of other States, rural population live mostly in villages of less than 2,000 population. Madhya Pradesh has 1,001 persons out of 10,000 living in villages of less than 200 population. Thus the peculiarity which emerges is, that in North Indian States rural population is found in smaller villages while in States like Andhra Pradesh and Madras, they are found in villages of average size. In States like Bihar, Gujarat, Maharashtra, Mysore, Punjab and West Bengal preference is shown to villages with a population of 1,000–1,999. In Kerala, most of the people are found living in villages of more than 5,000 and above. Perhaps this comparison may not be realistic unless other States have also formed panchayats grouping together villages which process has been completed in Madras State.

Rural population by size of villages in the districts

10. It will be interesting to compare the distribution of population within the State between the different size class of population. A table (VI - 6) similar to the table given earlier is presented below.

TABLE VI - 6

Population per 1,000 persons residing in villages in each district classified according to population, 1961

State/District	Population per 1,000 rural population in villages by size class of population					
	5,000+	2,000-4,999	1,000-1,999	500-999	200-499	Under 200
1	2	3	4	5	6	7
Madras State	**178**	**425**	**277**	**99**	**18**	**3**
Chingleput	73	290	393	194	44	6
North Arcot	71	420	346	136	24	3
South Arcot	47	377	375	169	27	5
Salem	179	532	231	44	12	2
Coimbatore	334	507	124	29	5	1
Nilgiri	773	193	23	11	...	...
Madurai	261	506	175	54	3	1
Tiruchirapalli	113	548	245	69	21	4
Thanjavur	52	397	398	126	19	8
Ramanathapuram	56	313	402	191	34	4
Tirunelveli	232	442	251	62	12	1
Kanyakumari	1,000	...	...	...	...	...

The conditions in Kanyakumari are totally different from other districts in the State in that all the rural population live in villages of more than 5,000. Nilgiri shows less urban characteristics by its absence of cultivation and having 773 persons out of 1,000 in villages of size 5,000+. Coimbatore has 334 persons living in large sized villages of 5,000+. The maximum population in small villages (200 –499) is found in Chingleput with a proportion of 44. The general trend is for people to live in medium sized villages of 2,000—4,999 and 1,000—1,999. Kanyakumari is a class by itself. Salem and Coimbatore show the same pattern. Chingleput, North Arcot and South Arcot can be grouped together having a pattern of village life similar to each other. Madurai is more like Tirunelveli than Tiruchirapalli and Thanjavur. Tiruchirapalli and Thanjavur form a distinct group along with Ramanathapuram in having a preponderance of medium sized villages. Again, this comparison cannot be realistic as an indicator of the population pattern because no definite principles have been laid down covering the constitution of villages or panchayats. Realistic picture can only emerge if the population pattern based on residential unit of hamlets is examined.

Correlation between villages and location code units

11. Madras has 15,077 Location Code Units. A statement districtwise is appended herewith.

TABLE VI - 7

Total number of revenue villages in each district of Madras State

District	No. of villages	Total No. of location code units
1	2	3
Chingleput	2,230	1,514
North Arcot	2,027	1,729
South Arcot	2,504	2,056
Salem	2,343	1,629
Coimbatore	1,013	960
Nilgiri	54	51
Madurai	1,475	921
Tiruchirapalli	1,569	1,452
Thanjavur	2,771	2,058
Ramanathapuram	4,772	1,648
Tirunelveli	1,072	1,007
Kanyakumari	62	52
Total	**21,892**	**15,077**

It will be seen that location code units consist of the majority of panchayats and a smaller number of villages. As against this, is also shown the number of villages in the State on the basis of districts in accordance with the registers maintained by the Revenue Department. There are 21,892 villages in the State. Panchayats generally consist of one or two villages; in a few cases, a village has also been split into two. But it is the exception to the general rule. Actually, in the administration of the State, panchayats as well as revenue villages have formed important units which are equally useful, one for the maintenance of revenue records and the other for the administration of the panchayats. All developmental works in the State are routed through panchayats. It is always intersting to examine whether it will be possible to regroup the villages or the panchayats as the case may be and give identical numbers to them in the revenue records and in administration and to use these units for Census and other purposes. It has not been attempted in 1961 because comparability of data collected in 1951 had to be maintained by giving figures to those units which existed in 1951. A correlation statement has also been prepared between the units of 1951 and 1961. The foregoing discussion will show that the Location Code Units by which the figures have been presented in this Census are bigger units than the revenue villages of the Madras State. These revenue villages sometimes consist of more than one hamlet; hamlets depending sometimes on the caste structure of the village.

The number of villages for the period 1901–1961 is given below:

1901	...	13,659
1911	...	11,803
1921	...	11,509
1931	...	11,501
1941	...	11,540
1961	...	14,233

The figures include only the ryotwari villages of 11 districts in the State excluding Kanyakumari. They indicate the fall from 1901-11. They remained stationary till 1941, thereby indicating the conservatism of the Revenue Department in changing the boundaries of villages. From 1941–61, there is an increase of 25% in the number of villages. This is due to the conversion of Estate villages into ryotwari villages, consequent on the abolition of Estates and Inams in the Madras State. However, ryotwari villages form the basic unit of administration in the State.

Population living in villages from 1901–61 in certain districts

12. An historical comparison of the proportion of 1,000 persons residing in villages classified according to the population ranges cannot throw any light on the changing pattern of the village sizes, an important reason being that the concept of a village is artificial and is not based on its natural growth. A table is however presented below for such of those districts the boundaries of which have not changed to any very great extent.

TABLE VI - 8

Changes in the proportion of 1,000 persons residing in villages classified according to population in selected districts, 1901–1961

District/Group of districts	Decade	Population per 1,000 rural population in villages by size class of population			
		2,000–4,999	1,000–1,999	500-999	Under 500
1	2	3	4	5	6
South Arcot	1901	193	346	306	142
	1911	224	368	281	106
	1921	211	378	290	105
	1931	233	384	277	89
	1941	276	383	258	71
	1951	306	361	232	63
	1961	377	375	169	32
Nilgiri	1901	413	382	56	26
	1911	401	347	94	27
	1921	490	263	80	33
	1931	476	182	60	13
	1941	422	160	11	11
	1951	214	16	12	5
	1961	193	23	11	...
Thanjavur	1901	206	370	300	113
	1911	233	366	282	111
	1921	223	364	284	114
	1931	227	376	267	107
	1941	271	273	279	84
	1951	363	358	169	64
	1961	397	398	126	27

TABLE VI-8 (Contd.)

Changes in the proportion of 1,000 persons residing in villages classified according to population in selected districts, 1901–1961

District/Group of districts	Decade	Population per 1,000 rural population in villages by size class of population			
		2,000–4,999	1,000–1,999	500–999	Under 500
1	2	3	4	5	6
Salem, Coimbatore &	1901	358	282	164	126
Tiruchirapalli	1911	389	306	136	84
	1921	439	301	113	60
	1931	445	306	103	39
	1941	438	301	93	39
	1951	485	223	67	28
	1961	529	203	47	15
Madurai, Ramanathapuram	1901	338	235	173	148
& Tirunelveli	1911	358	237	163	135
	1921	371	247	141	124
	1931	387	238	131	122
	1941	388	239	153	80
	1951	395	245	115	75
	1961	426	270	99	17

One striking feature is the fall in the number of persons living in smaller groups. This has been exhibited by all the selected districts in the State.

Comparison with 1891

13. A comparison of the proportion of persons residing in villages of different sizes between 1891 and 1961 is of interest. A table is presented below.

TABLE VI - 9

Changes in the proportion of 1,000 persons residing in villages classified according to population, 1891 & 1961

District	Census Year	Proportion of 1,000 persons residing in villages inhabited by					
		Less than 200	200-499	500-999	1,000-1,999	2,000-4,999	5,000+
1	2	3	4	5	6	7	8
South Arcot	1891	25	159	310	323	161	22
	1961	5	27	169	375	377	47
Nilgiri	1891	...	36	56	415	408	85
	1961	...	...	11	23	193	773
Thanjavur	1891	52	229	296	249	162	12
	1961	8	19	126	398	397	52
Salem, Coimbatore & Tiruchirapalli	1891	39	127	199	276	306	53
	1961	2	13	47	203	529	206
Madurai, Ramanathapuram & Tirunelveli	1891	50	104	174	240	338	94
	1961	2	15	99	270	426	188

In the case of the districts of Salem, South Arcot, Coimbatore, Tiruchirapalli, Madurai, Ramanathapuram, Tirunelveli, and Thanjavur, proportion of persons residing in villages of less than 200 population has fallen appreciably. In the case of South Arcot it is less marked. Again the proportion has fallen under 200 to 499 and 500 to 999. An increase has been marked in all categories of villages ranging between 1,000 to 5,000 and more except in the group of districts of Salem, Coimbatore and Tiruchirapalli where the proportion under 1,000-1,999 in 1961 is less than that of 1891. In other words, this table reflects the tendency of smaller villages to disappear from Census statistics giving place to bigger units. I must sound a word of caution to the reader. It does not necessarily reflect the change of pattern of living in the State because in Madras State, the change of statistical unit has always been arbitrary.

Density of road mileage

14. Table VI - 10 exhibits the number linear miles of roads in the State. It will be difficult to draw any parallel between the number of miles of roads and the number of villages in its different ranges.

TABLE VI - 10

Number of linear miles of road (excluding municipal roads) in the year 1961

State/ District	Total of all types of roads	Government roads (including N.H.,S.H.) excluding non-motorable roads	District or local board roads excluding non-motorable roads	District or local board roads (including non-motorable roads)
1	2	3	4	5
Madras State	**24,499**	**11,249**	**4,924**	**12,267**
Chingleput	1,743	778	295	957
North Arcot	1,732	815	483	906
South Arcot	2,171	861	318	1,213
Salem	2,641	1,247	961	1,351
Coimbatore	3,416	1,404	965	1,984
Nilgiri	371	220	76	151
Madurai	2,040	1,050	271	965
Tiruchirapalli	2,835	1,159	873	1,608
Thanjavur	2,761	1,055	206	1,251
Ramanathapuram	1,767	888	80	875
Tirunelveli	2,065	1,018	396	1,006
Kanyakumari	957	754	...	...

Table VI - 11 gives the density of the high and low road mileage related to the proportion of workers in industrial categories. The City of Madras because of its congestion need not be considered. The proportion of roads does not indicate any significant variation. The lowest mileage is recorded by North Arcot. The higher mileage of Nilgiri, Kanyakumari and Coimbatore is to a certain extent reflected in the larger number of people engaged in commerce and similar activities. Tirunelveli and Madurai have also recorded a higher proportion in these activities, though the mileage is comparatively less. To my mind, the mileage has no determining influence on the pattern of workers in the rural parts of Madras State. With its high density, the impact which road mileage can have, is necessarily limited.

TABLE VI - 11

Districts of high and low road densities related to the proportions of workers in industrial categories and to non-workers

Districts arranged in descending order of road density	No. of miles of road per 1,000 population	Distribution of 1,000 persons as workers and non-workers: WORKERS: As Cultivators, Agricultural Labourers, in Mining, Quarrying, Livestock, Forestry, Fishing, Hunting etc. (I to III)	At Household Industry and in Manufacturing other than Household Industry (IV & V)	In Construction, Trade & Commerce, Transport, Storage, and Communications and Other Services (VI to IX)	NON-WORKERS
1	2	3	4	5	6
Nilgiri	1.24	275	24	160	541
Kanyakumari	1.06	131	95	126	648
Coimbatore	1.04	240	94	147	519
Tiruchirapalli	0.96	359	47	87	507
Thanjavur	0.93	300	32	88	580
Chingleput	0.83	275	64	95	566
Ramanathapuram	0.83	333	59	88	520
Tirunelveli	0.82	251	99	106	544
South Arcot	0.75	367	25	66	542
Salem	0.74	355	70	88	487
Madurai	0.73	283	48	124	545
North Arcot	0.61	327	52	88	533
Madras	0.36	4	83	218	695

In Table VI - 12, the total mileage has been correlated to the rural population.

TABLE VI - 12

Number of linear miles of road in the year 1961 (excluding municipal roads) related to 1,000 of rural population of 1961

State/ District	Total mileage of all types of roads (year 1961)	Total rural population (1961)	No. of linear miles of road per 1,000 of rural population
1	2	3	4
Madras State	**24,499**	**24,696,425**	**0.99**
Chingleput	1,743	1,740,734	1.00
North Arcot	1,732	2,515,101	0.69
South Arcot	2,171	2,655,651	0.82
Salem	2,641	3,186,760	0.83
Coimbatore	3,416	2,525,302	1.35
Nilgiri	371	229,441	1.62
Madurai	2,040	2,195,482	0.93
Tiruchirapalli	2,835	2,512,007	1.13
Thanjavur	2,761	2,584,407	1.07
Ramanathapuram	1,767	1,822,307	0.97
Tirunelveli	2,065	1,882,397	1.10
Kanyakumari	957	846,836	1.13

North Arcot has the lowest mileage on record. It has maximum employment under cultivation and allied activities. The highest road mileage is recorded by Coimbatore. With the exception of Kanyakumari, it has recorded the lowest employment in agriculture and allied sector. It can be seen, that less is the mileage, more is the dependency of the population on agricultural activities. However, in Madras State, variation is observed from district to district as no significant effect has been made to link the rural parts of the State by various development schemes of the Government. In a statement prepared of the roads of India, it will be found that Madras has the highest mileage per thousand of population and the highest mileage per thousand square miles of area.

Impact of electrification

15. A table is given below showing the number of villages electrified and proportion of workers in various categories and non-workers. Much progress has been achieved in rural electrification in Madras State. But no data are available on the quantum of electricity consumed per one thousand of rural population.

TABLE VI - 13

No. of villages electrified and the amount of electricity consumed per 1,000 of rural population related to the proportion of workers in industrial categories and non-workers in rural population, 1961

State and District	No. of villages electrified as on 31-3-61*	Amount of electricity consumed per 1,000 rural population	Distribution of 1,000 persons as workers and non-workers			
			I, II & III	IV & V	VI, VII, VIII & IX	Non-workers
1	2	3	4	5	6	7
Madras State	**10,760**	**N. A.**	**374**	**44**	**78**	**504**
Chingleput	1,361	,,	332	46	78	544
North Arcot	1,413	,,	398	37	66	499
South Arcot	554	,,	409	20	50	521
Salem	862	,,	414	49	74	463
Coimbatore	2,093	,,	308	85	130	477

TABLE VI - 13 (Contd.)

No. of villages electrified and the amount of electricity consumed per 1,000 of rural population related to the proportion of workers in industrial categories and non-workers in rural population, 1961

State and District	No of villages electrified as on 31-3-61*	Amount of electricity consumed per 1,000 rural population	Distribution of 1,000 persons as workers and non-workers			
			I, II & III	IV & V	VI, VII, VIII & IX	Non-workers
1	2	3	4	5	6	7
Nilgiri	296	N.A.	354	14	131	501
Madurai	1,046	,,	385	27	94	494
Tiruchirapalli	464	,,	438	35	63	464
Thanjavur	506	,,	362	22	64	552
Ramanathapuram	700	,,	422	35	60	483
Tirunelveli	748	,,	328	78	85	509
Kanyakumari	432	,,	146	94	118	642

* Madras State Electricity Board Annual Administration Report, 1960-61.

N.A. :—Not Available.

Electricity is used in Madras State for lighting as well as for agriculture. Its impact, therefore, on the pattern of distribution of workers will not be significant. For instance, if we take a district like Coimbatore which has 2,093 villages electrified, its pattern of workers follows the pattern which is otherwise found in that it has less persons depending on agriculture than on other items of work. Again electrification does not necessarily imply the employment of more workers in the agricultural field.

Actually in districts where more electricity is used in agriculture, lesser number of persons depend on it. Coimbatore and South Arcot will prove this point.

Distribution of villages by size class of villages

16. Table VI - 14 gives the distribution of 1,000 villages in the State and districts by size of villages.

TABLE VI - 14

Distribution of 1,000 villages of certain population classses, 1961

State/District	Villages with population					
	Less than 200	200-499	500-999	1,000-1,999	2,000-4,999	5,000+
1	2	3	4	5	6	7
Madras State	**56**	**90**	**228**	**338**	**250**	**38**
Chingleput	73	145	311	338	122	11
North Arcot	32	94	272	367	219	16
South Arcot	56	103	298	352	182	9
Salem	38	72	122	331	385	52
Coimbatore	33	44	113	237	440	133
Nilgiri	...	...	81	108	324	487
Madurai	16	22	176	303	388	95
Tiruchirapalli	63	104	170	301	331	31
Thanjavur	124	78	221	376	189	12
Ramanathapuram	41	117	321	366	145	10
Tirunelveli	36	73	169	357	300	65
Kanyakumari	...	...	...	...	...	1,000

Table VI - 15 gives the distribution of 1,000 villages by size class of villages for Census years 1931 to 1961.

TABLE VI - 15

Changes in the distribution of 1,000 villages of certain population classes, 1931–1961

District	Proportion of villages with population under 500 to 1,000 of all villages				Proportion of villages with population 500-999 to 1,000 of all villages				Proportion of villages with population 1,000-1,999 to 1,000 of all villages			
	1931	1941	1951	1961	1931	1941	1951	1961	1931	1941	1951	1961
1	2	3	4	5	6	7	8	9	10	11	12	13
Chingleput	521	504	473	218	302	291	289	311	135	157	165	338
North Arcot	300	290	220	126	348	354	287	272	262	263	315	367
South Arcot	288	256	249	159	362	352	341	298	264	285	281	352
Salem	282	284	244	110	209	205	162	122	328	275	307	331
Coimbatore	152	143	104	77	184	199	131	113	276	278	248	237
Nilgiri	132	130	109	...	170	56	87	81	264	278	43	108
Madurai	268	255	225	38	198	198	171	176	250	243	256	303
Tiruchirapalli	191	203	226	167	174	172	193	170	353	355	273	301
Thanjavur	422	358	344	202	290	321	240	221	218	228	273	376
Ramanathapuram	777	490	665	158	126	331	165	321	62	114	121	366
Tirunelveli	186	176	194	109	206	190	199	169	328	332	307	357

Distribution of rural population and urban population in certain sizes of villages and towns

17. The statement below shows the distribution of 1,000 of total population in villages of 2,000 and over, and in towns of population below 20,000. A pattern is observed in the district of Tiruchirapalli where the maximum number of villages and towns are found under the group 5,000 to 9,999.

Workers and non-workers among rural population

18. Table VI - 17 exhibits the distribution of 1,000 persons by each industrial category of worker and non-worker of rural population of districts.

TABLE VI - 16

Distribution of 1,000 of total population in villages of 2,000 and over and in towns of population below 20,000

(Number of villages and towns in each category shown in brackets under columns 3 to 8)

District	Proportion of rural population to 1,000 of total population	Distribution of 1,000 of total rural population in villages of population			Distribution of 1,000 of total urban population in towns of population		
		2,000—4,999	5,000—9,999	10,000+	Class VI (under 5,000)	Class V (5,000—9,999)	Class IV (10,000—19,999)
1	2	3	4	5	6	7	8
Chingleput	793	290 (176)	54 (14)	19 (2)	51 (10)	119 (7)	365 (12)
North Arcot	799	420 (369)	67 (26)	4 (1)	13 (3)	80 (7)	221 (10)
South Arcot	871	377 (365)	35 (15)	12 (3)	... (...)	79 (4)	360 (11)
Salem	838	533 (578)	143 (71)	36 (8)	... (...)	131 (10)	137 (6)
Coimbatore	710	507 (395)	279 (108)	55 (11)	7 (2)	64 (8)	163 (11)
Nilgiri	561	193 (12)	260 (9)	513 (9)	37 (2)	169 (4)	345 (5)
Madurai	684	506 (340)	216 (75)	45 (8)	1 (1)	41 (6)	228 (16)
Tiruchirapalli	787	548 (465)	113 (44)	... (...)	27 (5)	128 (12)	202 (11)
Thanjavur	796	397 (359)	52 (22)	... (...)	17 (3)	184 (15)	190 (9)
Ramanathapuram	752	313 (207)	43 (12)	13 (2)	33 (5)	122 (11)	219 (10)
Tirunelveli	689	442 (273)	181 (52)	51 (7)	17 (5)	92 (11)	228 (15)
Kanyakumari	849	... (...)	12 (1)	988 (45)	... (...)	... (...)	292 (3)

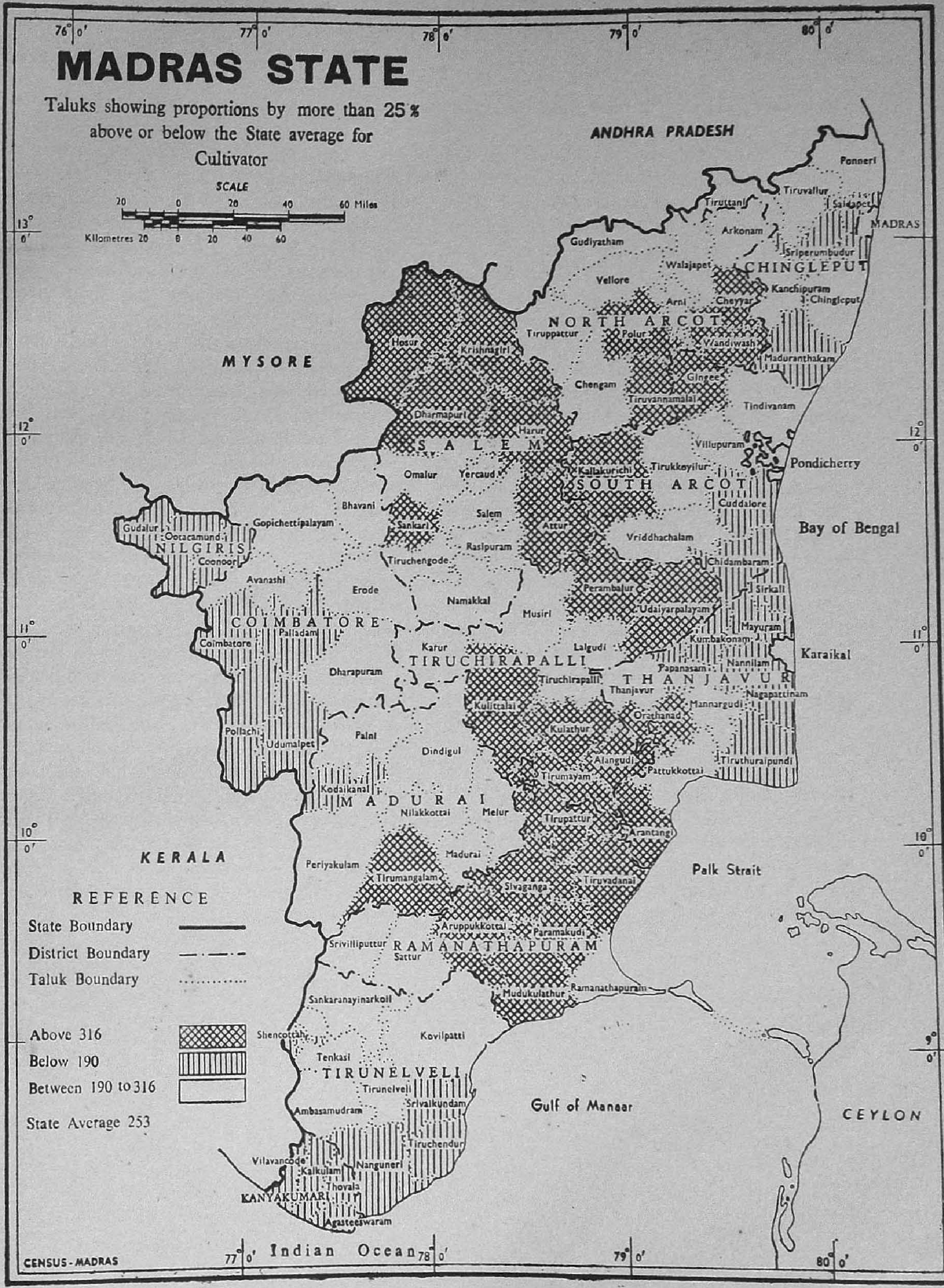
Table VI - 17

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population of districts, 1961

State/District	Total Population	Distribution per 1,000 of rural population as: WORKERS										NON-WORKERS
		Total	I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12	13
Madras State	**1,000**	**496**	**253**	**108**	**13**	**34**	**11**	**4**	**11**	**2**	**60**	**504**
Salem	1,000	537	329	77	8	40	9	5	10	2	57	463
Coimbatore	1,000	523	199	99	10	65	20	10	15	2	103	477
Thanjavur	1,000	448	185	166	11	13	10	3	14	2	44	552
Madurai	1,000	506	245	123	17	17	10	3	11	2	78	494
Tiruchirapalli	1,000	536	333	97	8	24	11	4	8	2	49	464
North Arcot	1,000	501	295	95	8	28	9	3	9	2	52	499
South Arcot	1,000	479	256	146	7	17	3	3	8	1	38	521
Tirunelveli	1,000	491	215	94	18	65	14	3	16	2	64	509
Ramanathapuram	1,000	517	328	85	10	25	9	2	9	1	48	483
Chingleput	1,000	456	185	134	13	28	18	4	11	5	58	544
Kanyakumari	1,000	358	83	35	29	81	13	4	17	3	93	642
Nilgiri	**000**	**499**	**136**	**72**	**146**	**2**	**12**	**6**	**7**	4	114	501

The general pattern of the rural population is as follows :—

Out of a total number of 496 workers, 253 fall in the category I of Cultivator and 108 in category II of Agricultural Labourer. They account more than 70% of the total working population of the rural sector. About 12% of workers belong to category IX - Other Services, out of which a substantial portion are casual labourers who have no fixed place of work. The only other important category is IV-Household Industry with a proportion of 34, i.e., 7% of workers. Under category III-Mining etc., a good number of persons are employed in the rural sector of Nilgiri district, but in other districts, the proportion is very much less. The rural economy is to a large extent determined by participation in categories I and II and the general pattern of the districts in its employment of agricultural labourers will be of interest. Salem, Tiruchirapalli and Ramanathapuram have recorded a large number of Cultivators, i.e., more than 25% above the State average. Thanjavur, Chingleput, Kanyakumari and Nilgiri have recorded less by more than 25% above the State average under Cultivator. Similarly under Agricultural Labourer, Thanjavur and South Arcot have recorded more than 25%of the State average, while Salem, Kanyakumari and Nilgiri have recorded less by more than 25% of the State average. It, therefore, means that Kanyakumari and Nilgiri are definitely below average. A larger participation is found in category III in Nilgiri district and in category IV in Kanyakumari district. Urban areas of these two districts do not have the same pattern as the urban areas of other districts. It will appear strange that Salem and Thanjavur show opposing tendencies, the participation in agricultural sector remaining almost the same. Tiruchirapalli has much higher proportion under Cultivator than under Agricultural Labourer. The pattern in other districts tends to fall in line with the State picture. It will no doubt appear strange that both Thanjavur and South Arcot which can be considered to be the paddy producing areas of the State have got less number of agriculturists. But this is more than counterbalanced by the large number of agricultural labourers who work in the districts and this trend, therefore, does not indicate the pattern of employment in the rural sector, but the distribution of land holdings with richer land holders found in these two districts when compared with other districts. Again in Thanjavur and South Arcot districts, a system known as Pannaiyal system is prevalent under which landlords cultivate their own lands with the assistance of hired labourers, while in other districts like Salem and Ramanathapuram which record a larger number of cultivators, small land-holders own and cultivate their lands. In Table VI - 18 are presented those districts where the distribution of 1,000 persons shows a different tendency from that of the State as a whole. Detailed break-up figures are presented for taluks in Chingleput, South Arcot, Salem, Nilgiri, Tiruchirapalli, Thanjavur, Ramanathapuram and Kanyakumari. Two maps have been prepared indicating the pattern of distribution under Cultivator and Agricultural Labourer.



MADRAS STATE
Taluks showing proportions by more than 25 % above or below the State average for Cultivator
SCALE
60 Miles
Kilometres
ANDHRA PRADESH
MYSORE
KERALA
Bay of Bengal
Palk Strait
Gulf of Manaar
CEYLON
Indian Ocean
CHINGLEPUT
NORTH ARCOT
SALEM
SOUTH ARCOT
NILGIRIS
COIMBATORE
TIRUCHIRAPALLI
THANJAVUR
MADURAI
RAMANATHAPURAM
TIRUNELVELI
KANYAKUMARI
MADRAS
Pondicherry
Karaikal
REFERENCE
State Boundary
District Boundary
Taluk Boundary
Above 316
Below 190
Between 190 to 316
State Average 253
CENSUS-MADRAS

TABLE VI - 18

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population in selected districts

District and Taluk	Total Population	Distribution per 1,000 of rural population as — WORKERS										NON-WORKERS
		Total	I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12	13
CHINGLEPUT	1,000	456	185	134	13	28	18	4	11	5	58	544
1. Ponneri	1,000	453	198	141	19	18	12	3	12	4	46	547
2. Tiruvallur	1,000	455	190	163	7	19	9	5	10	4	48	545
3. Tiruttani	1,000	527	240	152	12	80	4	2	9	3	25	473
4. Sriperumbudur	1,000	443	154	133	10	27	22	5	13	8	71	557
5. Saidapet	1,000	388	64	73	20	7	74	8	18	10	114	612
6. Chingleput	1,000	420	204	96	14	15	13	4	10	6	58	580
7. Kanchipuram	1,000	498	250	118	10	53	9	3	8	2	45	502
8. Maduranthakam	1,000	470	185	177	12	18	7	2	10	2	57	530
SOUTH ARCOT	1,000	479	256	146	7	17	3	3	8	1	38	521
1. Gingee	1,000	502	340	100	5	16	1	2	7	1	30	498
2. Tindivanam	1,000	488	277	129	8	21	3	2	7	1	40	512
3. Villupuram	1,000	454	207	165	5	18	2	2	9	1	45	546
4. Tirukkoyilur	1,000	479	269	135	7	15	1	2	7	1	42	521
5. Kallakurichi	1,000	522	326	122	9	14	1	2	7	1	40	478
6. Vriddhachalam	1,000	513	292	147	13	9	5	7	7	3	30	487

TABLE VI - 18 (Contd.)

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population in selected districts

District and Taluk	Total Population	Distribution per 1,000 of rural population as										NON-WORKERS
		WORKERS										
		Total	I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12	13
SOUTH ARCOT (Contd.)												
7. Cuddalore	1,000	444	178	172	5	28	8	4	10	3	36	556
8. Chidambaram	1,000	433	177	185	4	15	3	2	9	1	37	567
SALEM	1,000	537	329	77	8	40	9	5	10	2	57	463
1. Hosur	1,000	510	422	29	4	8	2	1	8	1	35	490
2. Krishnagiri	1,000	552	409	70	4	12	3	2	10	1	41	448
3. Harur	1,000	541	387	80	3	14	3	5	9	1	39	459
4. Dharmapuri	1,000	543	379	82	8	17	3	3	11	2	38	457
5. Omalur	1,000	502	272	63	18	49	11	6	9	2	72	498
6. Yercaud	1,000	572	248	30	204	2	8	15	10	2	53	428
7. Salem	1,000	507	217	75	9	73	32	9	14	4	74	493
8. Sankari	1,000	550	326	64	4	67	5	6	7	2	69	450
9. Tiruchengode	1,000	590	309	75	6	100	13	6	9	3	69	410
10. Rasipuram	1,000	566	252	77	4	94	18	8	11	2	100	434
11. Attur	1,000	535	323	107	8	19	6	6	9	2	55	465
12. Namakkal	1,000	550	302	117	3	44	5	7	11	1	60	450

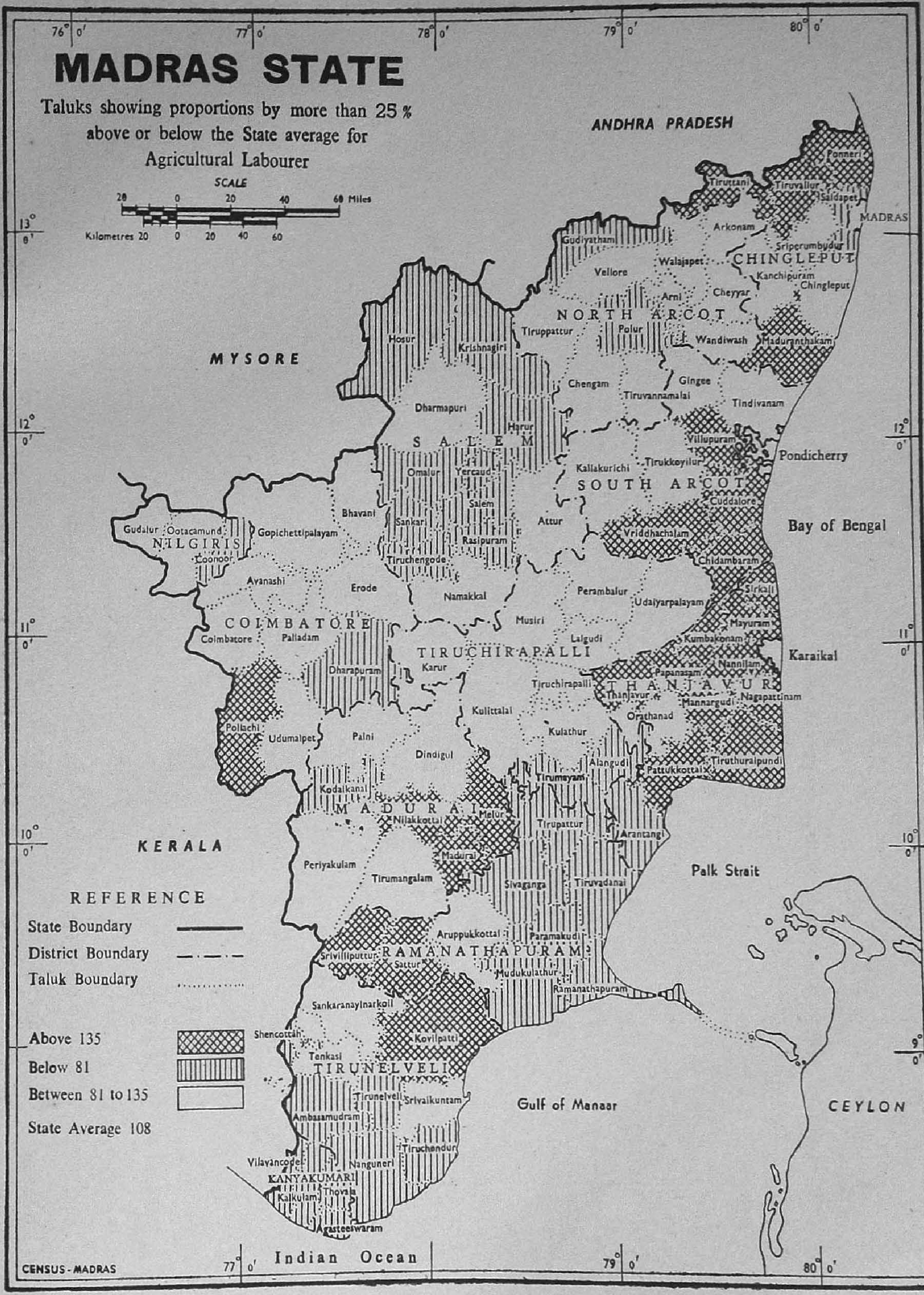

MADRAS STATE
Taluks showing proportions by more than 25 % above or below the State average for Agricultural Labourer
SCALE
20 0 20 40 60 Miles
Kilometres 20 0 20 40 60
ANDHRA PRADESH
MYSORE
KERALA
MADRAS
Bay of Bengal
Pondicherry
Karaikal
Palk Strait
Gulf of Manaar
CEYLON
Indian Ocean
CHINGLEPUT
NORTH ARCOT
SOUTH ARCOT
SALEM
NILGIRIS
COIMBATORE
TIRUCHIRAPALLI
THANJAVUR
MADURAI
RAMANATHAPURAM
TIRUNELVELI
KANYAKUMARI
Ponneri
Tiruttani
Tiruvallur
Saidapet
Arkonam
Sriperumbudur
Gudiyatham
Walajapet
Kanchipuram
Chingleput
Vellore
Arni
Cheyyar
Tiruppattur
Polur
Wandiwash
Madurantakam
Hosur
Krishnagiri
Chengam
Gingee
Tiruvannamalai
Tindivanam
Dharmapuri
Harur
Villupuram
Kallakurichi
Tirukkoyilur
Omalur
Yercaud
Salem
Cuddalore
Bhavani
Sankari
Attur
Vriddhachalam
Gudalur
Ootacamund
Gopichettipalayam
Rasipuram
Coonoor
Tiruchengode
Chidambaram
Avanashi
Erode
Namakkal
Perambalur
Sirkali
Udaiyarpalayam
Mayuram
Musiri
Coimbatore
Palladam
Lalgudi
Kumbakonam
Nannilam
Dharapuram
Karur
Papanasam
Tiruchirapalli
Thanjavur
Mannargudi
Nagapattinam
Kulittalai
Orathanad
Pollachi
Udumalpet
Palni
Kulathur
Dindigul
Alangudi
Tiruthuraipundi
Pattukkottai
Tirumayam
Kodaikanal
Nilakkottai
Melur
Tirupattur
Arantangi
Madurai
Periyakulam
Tirumangalam
Sivaganga
Tiruvadanai
Aruppukkottai
Paramakudi
Srivilliputtur
Sattur
Mudukulathur
Ramanathapuram
Sankaranaynarkoil
Shencottah
Kovilpatti
Tenkasi
Tirunelveli
Srivaikuntam
Ambasamudram
Tiruchendur
Vilavancode
Nanguneri
Kalkulam
Thovala
Agasteeswaram
REFERENCE
State Boundary
District Boundary
Taluk Boundary
Above 135
Below 81
Between 81 to 135
State Average 108
CENSUS-MADRAS

TABLE VI – 18 (Contd.)

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population in selected districts

District and Taluk	Total Population	Distribution per 1,000 of rural population as										
		WORKERS										NON-WORKERS
		Total	I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12	13
NILGIRI	1,000	499	136	72	146	2	12	6	7	4	114	501
1. Gudalur	1,000	476	102	110	170	4	5	4	8	2	71	524
2. Ootacamund	1,000	517	173	93	71	3	8	6	7	3	153	483
3. Coonoor	1,000	486	103	42	220	2	18	5	8	5	83	514
TIRUCHIRAPALLI	1,000	536	333	97	8	24	11	4	8	2	49	464
1. Perambalur	1,000	567	393	103	12	14	5	4	4	1	31	433
2. Udaiyarpalayam	1,000	511	330	117	5	21	4	1	5	1	27	489
3. Lalgudi	1,000	515	291	102	10	27	11	5	10	2	57	485
4. Musiri	1,000	521	284	89	9	39	7	7	9	1	76	479
5. Karur	1,000	572	298	117	9	49	20	5	9	2	63	428
6. Kulittalai	1,000	561	357	104	6	19	9	2	10	2	52	439
7. Tiruchirapalli	1,000	444	195	94	9	18	33	5	16	9	65	556
8. Kulathur	1,000	560	392	86	11	15	14	3	9	1	29	440
9. Alangudi	1,000	600	502	54	4	8	5	2	6	1	18	400
10. Tirumayam	1,000	493	339	40	6	12	10	4	12	1	69	507

TABLE VI - 18 (Contd.)

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population in selected districts

District and Taluk	Total Population	Distribution per 1,000 of rural population as WORKERS Total	I	II	III	IV	V	VI	VII	VIII	IX	NON-WORKERS X
1	2	3	4	5	6	7	8	9	10	11	12	13
THANJAVUR	1,000	448	185	166	11	13	10	3	14	2	44	552
1. Sirkali	1,000	419	126	193	21	12	7	3	17	2	38	581
2. Mayuram	1,000	402	120	178	11	10	11	5	16	2	49	598
3. Kumbakonam	1,000	414	124	140	7	32	15	4	21	3	68	586
4. Nannilam	1,000	418	107	213	9	9	12	5	17	3	43	582
5. Papanasam	1,000	427	141	183	10	13	7	2	14	2	55	573
6. Thanjavur	1,000	452	195	156	7	12	8	4	12	2	56	548
7. Orathanad	1,000	507	355	105	4	9	3	2	5	...	24	493
8. Mannargudi	1,000	450	191	178	8	10	10	2	10	2	39	550
9. Nagapattinam	1,000	442	99	228	17	12	14	5	23	4	40	558
10. Tiruthuraipundi	1,000	461	181	189	12	13	8	2	12	2	42	539
11. Pattukkottai	1,000	513	284	143	14	13	8	2	13	1	35	487
12. Arantangi	1,000	505	380	54	14	8	7	1	11	1	29	495
RAMANATHAPURAM	1,000	517	328	85	10	25	9	2	9	1	48	483
1. Tirupattur	1,000	484	324	73	5	13	3	2	8	1	55	516
2. Sivaganga	1,000	514	385	54	4	8	6	1	4	1	51	486

TABLE VI - 18 (Contd.)

Distribution of 1,000 persons by each industrial category of worker and non-worker of the rural population in selected districts

District and Taluk	Total Population	Distribution per 1,000 of rural population as										
		WORKERS										NON-WORKERS
		Total	I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12	13
RAMANATHAPURAM (Contd.)												
3. Tiruvadanai	1,000	502	387	52	10	9	4	1	8	1	30	498
4. Paramakudi	1,000	487	394	44	2	13	2	1	4	1	26	513
5. Ramanathapuram	1,000	429	233	30	32	55	5	2	18	7	47	571
6. Mudukulathur	1,000	515	387	41	16	26	2	...	7	1	35	485
7. Aruppukkottai	1,000	574	379	118	4	20	4	1	9	1	38	426
8. Sattur	1,000	561	250	153	8	29	37	4	12	1	67	439
9. Srivilliputtur	1,000	546	197	164	12	63	15	3	18	1	73	454
KANYAKUMARI	1,000	358	83	35	29	81	13	4	17	3	93	642
1. Vilavancode	1,000	346	86	31	23	104	8	3	14	3	74	654
2. Kalkulam	1,000	343	79	30	27	63	16	5	19	3	101	657
3. Thovala	1,000	384	94	44	23	23	14	3	16	3	164	616
4. Agasteeswaram	1,000	399	81	49	43	94	18	3	20	4	87	601

Geographical contiguity can be seen only in the case of Tiruchirapalli and Ramanathapuram districts both of which have recorded a higher proportion of workers under Cultivator. In Salem district, 6 out of 12 taluks, in Tiruchirapalli 6 out of 10 and in Ramanathapuram 6 out of 9 taluks have higher figures i.e., by more than 25% of the State average. They also account for the high proportion recorded in these districts. In both these districts, the taluks which have higher proportions are contiguous. 4 out of 11 taluks in North Arcot, 2 out of 8 in South Arcot, 1 in Madurai and 2 in Thanjavur have proportions higher by more than 25% of the State average. In Chingleput 3 out of 8, all the three taluks in Nilgiri, in Thanjavur 7 taluks out of 12 and in Kanyakumari all the 4 taluks have proportions less by more than 25% of the State average. Nilgiri and Kanyakumari are the only two districts which have recorded proportions less by more than 25% of the State average both in the category of Cultivator and Agricultural Labourer. Apart from the taluks in these districts, 4 out 9 in Coimbatore district, 2 out of 8 in South Arcot, 1 in Madurai and 4 in Tirunelveli have proportions less by more than 25% of the average for the State under Cultivator.

The proportion of Agricultural Labourer is greater than 25% of that of the State average in the districts of South Arcot and Thanjavur. 4 out of the 8 taluks in South Arcot and 10 out of 12 taluks in Thanjavur have high proportions. Salem, Nilgiri and Kanyakumari are the three districts which have proportions less by more than 25% of the State average for Agricultural Labourer. It is recorded in 9 taluks out of 12 in Salem district, in only one taluk of Nilgiri and in all the taluks of Kanyakumari. Apart from this, one taluk of Chingleput district, 2 taluks of North Arcot district, one of Coimbatore, one of Madurai, 2 of Tiruchirapalli, 1 of Thanjavur, 6 of Ramanathapuram and 5 of Tirunelveli have proportions less by more than 25% of the State average. A significant fact is that Salem district which has the highest proportion of Cultivator has a much lower proportion of Agricultural Labourer. This pattern is reversed in Thanjavur. In Salem district, most of the lands are in small holdings owned and cultivated by the owners. In Thanjavur, large holdings are owned by a few and cultivated with the help of hired workers. Further light on this aspect will be thrown when we discuss the classification of the land holdings in different districts of the State.

Educational levels of non-workers

19. Distribution of 1,000 persons not at work by educational standards for rural areas of the State is given in Subsidiary Table B III Part B-2

In illiteracy among non-workers, the proportion is below 25% of the State average in Kanyakumari district, the figures being 49% for males and 59.4% for females against the State average of 67.5% for males and 84.7% for females. Among literates without educational level, North Arcot and Salem have recorded proportions below by more than 25% of the State average. Among persons qualified upto Primary, Nilgiri and Kanyakumari have recorded figures which are higher by 25% above that of State's average. Kanyakumari has the figure of 16.8% and 10.4% for males and females as against 8.4% and 2.9% respectively for the State. The proportion is rather striking. This trend is also reflected in the category of Matriculation and above. When the literacy level of any district is high, there is possibility of greater unemployment because it is more difficult to employ educationally qualified persons.

Educational levels for workers

20. On the basis of Subsidiary Table B III Part B-1 which exhibits the distribution of 1,000 workers in each industrial category and in each sex by educational levels in rural areas of Madras State, we may examine the impact of literacy on working force. In Kanyakumari district, the percentage of literates among workers is higher than 25% of the State average. This higher proportion is particularly marked in the case of females which has recorded 7 times the proportion under Cultivator and 9 times the proportion under Agricultural Labourer. The proportion of persons of primary level is also higher in Kanyakumari. For females, the proportion is about 10 times higher in both the categories. Kanyakumari is the only district in the State which has recorded low proportion of illiterates even under Agricultural Labourer. Kanyakumari has reproduced the conditions of Kerala where the level of literacy

and level of unemployment are higher. In Nilgiri district also, the proportion of illiterates among males is lower by more than 25% of the State average under Cultivator (38.9%). Both in the category of Cultivator and Agricultural Labourer, the proportion of workers qualified upto Primary level is higher by more than 25% of the State average. One difference it has from Kanyakumari is that a higher proportion is recorded in the case of males than females. Salem district represents the other extreme with the highest proportion of illiterates–76.7% among males and 97.8% among females under category I and 89.7% for males and 99% for females under category II. Illiteracy is more pronounced among females. In category I, the proportion of males falls above 25% of the proportion of State average for illiterates. Even in the proportion of literates without educational level (19.7% for males and 1.8% for females) it has a proportion lower by more than 25% of the State average (37.5% for males and 4.1% for females) in the category of Cultivator. In the category of Agricultural Labourer also, the proportion of literates is the lowest compared to other districts and also much lower than 25% of the State proportion. Nilgiri (39.9%), Tirunelveli (50.2%), Thanjavur (47.8%) and Kanyakumari (52.9%) are the only districts which have greater proportion of literates than illiterates among males who work as Cultivators.

In rural areas, the number of persons who have attained the educational level of Matric and above is only few. Among males in the category of Cultivator, in Nilgiri and Kanyakumari, the proportion of Matrics is about 5 times higher than the corresponding proportion for the State, i.e., 0.6%. The proportion of Matrics in the category of Agricultural Labourer is generally negligible and only Kanyakumari has recorded a figure 0.5% under males and there are no figures under females. South Arcot and Nilgiri have recorded male workers qualified upto Matric in the category of Mining and Quarrying etc. at a level much higher than the State average of 1.1%. As Neyveli Lignite Corporation can provide plenty of employment for the educated, the proportion of Matrics in this category is higher in South Arcot district. In Nilgiri, plantations can provide employment for persons qualified upto Matric. In Chingleput district, in the category of Transport, the proportion of Matric qualified females is 30.2% which is nearly 4 times higher than the corresponding figure in the State (8.5%). In no other district such a high proportion is found in any category in the educational level of Matric and above. This may perhaps reflect the impact of Madras City on the district as many of the areas in Chingleput fall within the ambit of the metropolis.

Educational levels for unemployed

21. Subsidiary Table B VIII Part B-1, gives the distribution of 1,000 males and females who are unemployed, classified by educational standards for the rural areas of the State. This table is intended for the age-group 15 and above which is normally the employable category. In the State, one third of the unemployed males are Matric and above qualified persons. Under females, the proportion is about three fifth. This is more pronounced in Kanyakumari district where the proportion of unemployed female Matrics amount to 84.3% which is more than 25% of the State average. It is the only district which shows proportion more than 25% of the average of the State both among males and females. The proportion of illiterates among unemployed is the lowest in Kanyakumari district, 3.1% under males and 1.6% under females. A large number of illiterates among unemployed females is recorded in Ramanathapuram with a high figure of 38.3% as against 10% for the State. Ramanathapuram does not have much scope for agriculture and thereby restricts the scope for employment of illiterate people. Among males, the districts of Madurai, Thanjavur and Kanyakumari have proportions of illiterates among unemployed by more than 25% below that of the State average. The districts of Chingleput, Salem and Coimbatore have proportions higher by more than 25% of the State average. In the case of females one tenth of the unemployed are illiterates in the State. The districts of North Arcot, South Arcot, Salem, Coimbatore, Nilgiri, Tiruchirapalli and Ramanathapuram have recorded proportions which are higher than the State average by 25%. Thanjavur is the only district which has a higher proportion (i.e.) above 25% than that of the State average in male unemployed persons qualified upto Primary level (31.8%). Ramanathapuram has a lower proportion than that of the State average

by more than 25% (17.9%). In the case of males, the proportion is higher than the State average in the districts of Chingleput, South Arcot, North Arcot, Nilgiri, Thanjavur and Tiruchirapalli and lowest in Ramanathapuram. Chingleput and Coimbatore are the two districts which have proportions of male Matrics among unemployed by more than 25% below that of the State average. Chingleput being close to the Madras City, there is the possibility of the absorption of the educated unemployed. Similarly Coimbatore is a big manufacturing and industrial town which can absorb the educated unemployed in the neighbouring rural areas. In the case of females, the proportions are lower by more than 25% of the State average in the districts of South Arcot, Salem, Nilgiri, Tiruchirapalli, Madurai, Tirunelveli and Ramanathapuram.

Unemployed by broad age-groups

22. Table B IX-1 gives the proportion of unemployed per 1,000 of total population aged 15+ and in age-groups of 15-34, 35-59 and 60+. Among the population aged 15+, South Arcot and Salem have recorded 1 in 1,000 as unemployed and Kanyakumari has recorded 10 in 1,000. Chingleput, Nilgiri and Tirunelveli have recorded proportions higher than State average. In all other districts the proportion of unemployed belonging to the age-group 15+ mostly approximate to the State average. In Kanyakumari, Nilgiri, Chingleput and Tirunelveli, the proportion of male unemployed is much higher than that of the State average. Whereas in the State only 5 in 1,000 in this age-group among males are unemployed, Kanyakumari has recorded 16, Nilgiri 12, Tirunelveli 9 and Chingleput 8. In the State and in all other districts, except Tirunelveli and Kanyakumari the proportion of unemployed females is negligible. In Kanyakumari district 5 females per 1,000 are unemployed. This shows that there is greater unemployment among females in this district. As is to be expected, unemployed of both the sexes form a greater proportion in the age-group of 15-34 than in other age-groups. Kanyakumari, Nilgiri and Tirunelveli have recorded much higher proportions of unemployed in this age-group when compared with the State average. The State average is 4 against 19 of Kanyakumari, 10 of Nilgiri and 8 of Tirunelveli. In all other districts except Chingleput, which records a proportion of 7, the proportion corresponds more to that of the State. Chingleput (14), Nilgiri (19), Thanjavur (11), Tirunelveli (16) and Kanyakumari (29) have recorded higher proportions than the State average for males. In the case of females in no other district except the three districts of Nilgiri, Tirunelveli and Kayakumari, the unemployed form even 1 in 1,000. In Kanyakumari in the age-group of 15-34, 9 out of 1,000 females are unemployed. In the age-group 35-59 and 60+, the proportion of unemployed females is negligible at the State level. The proportion of males in the age-group 35-59 in the districts of Chingleput, Nilgiri, Tirunelveli and Kanyakumari is higher than the State figure. Only in the districts of South Arcot and Salem, the proportion of unemployed males in the age-group of 35-59 falls below the State proportion of 1 in 1,000. Ramanathapuram is the only district where 1 out of 1,000 females of the age-group 60+ is unemployed. It has less scope for agricultural activities and the people are sturdy and capable of working even after the age of 60. This explains the presence of unemployed in this age-group.

Non-workers by age-groups in rural areas

23. B IX-2 gives the distribution of 1,000 persons not at work by broad age-groups. Among the males not at work, 89% belong to the age-group 0-14. Among the females, 54% belong to this age-group. In the age-group 15-34 and 35-59 which constitutes the working force, males not at work form 6.3% and 1.4% respectively in the State. Females not at work in these two age-groups are 23.8% and 15.4% respectively. Kanyakumari is the only district which has a high proportion of males not at work belonging to the age-group of 15-34. It is 11.6% against 6.3% for the State. Nilgiri has also recorded a proportion higher by more than 25% that of the State average. Salem records a proportion less by more than 25% of the State average. In the age-group 35-59, among males, all districts except Salem and Thanjavur, have proportions ranging between 1.1% and 1.6%. Salem district has recorded a proportion lower by more than 25% and Thanjavur 25% higher compared to the State figure. The proportion of persons not at work belonging to age-

group 60+ is more or less similar, in all the districts in the State except in Nilgiri and Coimbatore where the proportion is less than 25% of the State average in the former while it is higher by more than 25% in the latter.

In the case of females, Nilgiri is the only district which has a proportion of persons not at work in the age-group 0-14, more than 25% higher than that of the State and less by more than 25% the State average in all other age-groups. Nilgiri has large tea and coffee estates which can provide employment opportunities for females above the age-group of 0–14. The proportion of females in each age-group out of the total females not at work in all other districts fall within the range of about 12% of the State average.

Non-workers by sex and types of activity

24. Subsidiary table B IX-3 gives the distribution of 1,000 persons not at work by sex and 1,000 non-workers of each sex by type of activity. Of the non-workers, males form 37.5% and females 62.5% in the rural areas. The proportion is almost identical, to that of the urban sector where males form 36.4% and females 63.6% of the non-working population. No variation is seen in the proportion of rural and urban sectors in all the districts.

Males seeking employment for the first time form 0.6% of the total male non-workers. Those who are once employed and now unemployed and seeking employment constitute 0.2%. Similarly figures for the urban sector is 3.1% and 1.4% respectively. Kanyakumari has the highest proportion of males and females seeking employment for the first time (1.9% of male and 0.3% of female non-workers). The other districts which have higher proportions i.e. by more than 25% higher than that of the State average in the case of males are Tirunelveli, Chingleput, Thanjavur and Nilgiri. In Tirunelveli and Kanyakumari, females seeking employment for the first time form 0.1% and 0.3% respectively of the total non-workers and in all other districts the figure is negligible. Among males once employed and now out of employment and seeking work, the proportions in Nilgiri, Tirunelveli and Chingleput are more than double that of the average for the State. As employment in plantations cannot be regular, Nilgiri has recorded the highest proportion under this group. The proportion of females once employed and now unemployed and seeking work is negligible in all the districts.

Kanyakumari is the only district which has, among male non-workers who are students, a proportion 25% higher than that of the State average. No district falls below the 25% range. Among females, Kanyakumari, Nilgiri and Tirunelveli have recorded proportions higher by more than 25% of the average for the State and Salem records proportion lower by more than 25%. Kanyakumari is the only district which has almost the same proportion of students among non-workers both in the rural and in the urban sector. It explains the prevalence of high rate of literacy both in rural and urban areas among males and females.

Among the female non-workers, 46.4% are persons engaged in household duties. In all districts except Nilgiri and Thanjavur the proportion does not vary by more than 12% above or below the average for the State. As many females are employed in plantations of Nilgiri district, their proportion engaged in household duties is much less. Females engaged in household duties constitute a greater percentage of persons not at work in the urban areas than in rural areas in almost all the districts of the State. The proportion of males who are retired and living on royalty, rent or dividend is higher in Coimbatore. The proportion of beggars and vagrants among male non-workers is high in Thanjavur and Kanyakumari districts. Coimbatore has the highest proportion of males who are inmates of penal, mental and charitable institutions. Though it has only 0.7% of the persons not at work in the district, the corresponding proportion in the State is only 0.1%. In most of the districts, the proportion is negligible.

Educational levels for population aged 5+ by age-groups

25. Subsidiary Table C III Part C-1 gives the distribution of 1,000 persons aged 5+ in each age-group and sex by educational levels in rural areas of Madras State. In the total population aged 5+, illiteracy among females is much higher than among males. This proportion is reflected

in other age-groups also. Under females, illiteracy has recorded a steady fall as we move down the age-groups. In the age-group 5-14, there is the least quantum of literacy. The fall from 862 in the age-group 15-34 to 765 in the age-group 5-14 per 1,000 females shows the remarkable improvement in literacy among females in the State during recent years. The trend of steady improvement is maintained among males also, the rate being lower than that of females, because the male section offers less scope for improvement. But a distortion in the picture is observed when we consider the age-groups 15-34 and 5-14 for males.

We find illiteracy is higher in the age-group 5-14. As literacy has been defined as the capacity to read and write, a section of the age-group 5-14 will be returned as illiterates. There is variation observed from district to district in the number of persons who are illiterates in the age-group 5-14. This may reflect the comparative efficiency of applying the literacy test and also the lateness in sending children to schools. Other categories of literates do not need any detailed elucidation.

Community development in rural areas

26. No study of the rural population will be complete without a reference to the Community Development Programme primarily intended for the betterment of the rural people. Its details and achievements with relevant statistics will be found in the Chapter on Planning. Suffice it to say, this movement has been in operation during the last decade. It aimed at a change in the outlook of the villagers. It also aimed at improvement of facilities in rural parts of the State; in the latter much success has been recorded. In the State today, the movement is being implemented through the Panchayats which have covered the entire State.

As indicated earlier, the rural population forms 73.31% of the total population according to Census definition. The Community Development has adopted a different approach to the problem. It has excluded only municipalities from the benefit of the scheme and as such 82.84% of the population are covered by the Community Development Programme. A statement showing the population of the State and districts for municipal and non-municipal areas and percentage to total population is given below.

TABLE VI - 19

Statement showing population of State and districts for municipal and non-municipal areas and percentage to total population

State/District	Total population	Population in non-municipal areas	Percentage of non-municipal population to total population	Percentage of rural population as defined in Census	Population in municipal areas	Percentage of population in municipal areas to total population
1	2	3	4	5	6	7
Madras State	**33,686,953**	**27,907,113**	**82.84**	**73.31**	**5,779,840**	**17.16**
1. Madras	1,729,141	...	...	...	1,729,141	100.00
2. Chingleput	2,196,412	2,020,393	91.99	79.25	176,019	8.01
3. North Arcot	3,146,326	2,700,266	85.82	79.94	446,060	14.18
4. South Arcot	3,047,973	2,850,273	93.51	87.13	197,700	6.49
5. Salem	3,804,108	3,531,092	92.82	83.77	273,016	7.18
6. Coimbatore	3,557,471	2,944,927	82.78	70.99	612,544	17.22
7. Nilgiri	409,308	328,478	80.25	56.06	80,830	19.75
8. Madurai	3,211,227	2,539,872	79.09	68.37	671,355	20.91
9. Tiruchirapalli	3,190,078	2,797,215	87.68	78.74	392,863	12.32
10. Thanjavur	3,245,927	2,868,096	88.36	79.62	377,831	11.64
11. Ramanathapuram	2,421,788	2,071,940	85.55	75.25	349,848	14.45
12. Tirunelveli	2,730,279	2,407,725	88.19	68.95	322,554	11.81
13. Kanyakumari	996,915	846,836	84.95	84.95	150,079	15.05

It will be found that large scale variations can be found in some districts between Census rural population and rural population as envisaged by the Community Development Programme. In Nilgiri, 80.25% form the rural development population, while the corresponding Census rural population is 56.06% of the total population. From this we cannot conclude that there is any marked variation between the rural populations of Census and Community Development. The municipalities are formed by Statutes. The Government does not always notify an area as a municipality as soon as some urbanity is achieved. Also, the elevation of a place to the status of a municipality is governed by considerations other than urbanity. Inspite of these limitations, the variations observed are of sufficient interest, the variations being most marked in Nilgiri and Tirunelveli. No variation is observed in Kanyakumari because of the manner in which the district is divided into panchayats of large sizes. It was difficult to localise hamlets which are urban. As such only municipalities were declared as urban in that district.

The Community Development Programme is based to a large extent on holdings of land. It can, therefore, benefit only those sections of population which own economic sizes of lands. To what extent the rural parts of Madras State have this basic requirement and to what extent the people can benefit by any scheme based on land will be highlighted in our discussion on Land Holdings later.

CHAPTER VII

MIGRATION

General

Indian Census has always ignored migration as a basic characteristic of its population. It has assumed that bulk of the people are immobile with roots in their place of birth and the shift in population brought about by migration is insignificant. But owing to the development of communications and industrial expansion, movement from place to place has been accelerated. Such movement has great significance in a study of demography and for proper planning. I propose to study in this Chapter the movement of population in the State of Madras based on the data collected in the Census schedule.

The study of migration of population is to be based on information obtained by questions on birth place. This has been the practice of Indian Census and has been continued in 1961 also. However, a further refinement has been introduced in 1961 by eliciting information on the rural and urban characteristics of the birth place and period of residence in the place of enumeration, if born elsewhere. This additional information would, it was hoped, help demographers in studying the rates of rural-urban migration as also the extent of in-migration. But these data have their limitations. The birth place return will be rendered valueless to a certain extent by the tendency of population to attribute the place of enumeration, as place of birth. Again mothers in India do go to their mother's houses for confinement and as such enumeration is likely to give a distorted picture of the actual conditions prevailing in the country. The tendency for the population to avail of facilities offered by hospitals has increased and the place of birth may be the place where the hospital is located. Again the data do not give us the actual picture of the movement of population because the places to which movement has taken place between the time of birth and the date of enumeration in 1961 are not revealed by the data at our disposal. These movements have a significant role in studying the economy of the country. As such, the birth data will only give an approximate idea of the movement of population which can be used for studying the large trends in population migration.

Migrants in the State and districts

2. I give below a table showing the total population, persons born in the place of enumeration, born in other areas of the district of enumeration, born in other districts of the State, born in other States in India and born outside the country.

TABLE VII - 1

Number of migrants and proportion per 10,000 of total population by types of migration

Type of migrants	Population	Proportion per 10,000 of total population
1	2	3
Total population	33,686,953	10,000
(a) Born in place of enumeration	24,511,605	7,276
(b) Born elsewhere in the district of enumeration	6,421,242	1,906
(c) Born in other districts of the State	2,062,546	612
(d) Born in adjacent States	539,623	160
(e) Born in other States in India	48,122	15
(f) Born in countries outside India	80,509	24
(g) Born at sea	3	N
(h) Birth place unclassified	23,303	7

N denotes negligible figures.

Migrants constitute only 27.2% of the total population. Of this, 19.1% are migrants within

the districts and 6.1% are migrants from outside districts within the State. 1.75% of the total population are born in other States of India. A small percentage, 0.24% are born in countries outside India. It, therefore, follows that more than 90% of the total population are migrants within the districts, migration from other districts, States and outside India forming only an insignificant proportion. One peculiar feature in Madras State is that the number of persons born in countries outside India and enumerated elsewhere is 24 per 10,000 as against 15 of persons born in distant States of India. Countries from where a good number of persons have come to Madras are Ceylon (23,428), Burma (18,115), Singapore, Malaya and British Borneo (22,683) and Pakistan (7,095). Of the countries outside Asia, U. K. (1,359) and U. S. A. (741) are significant. This shows two tendencies; (1) the return of residents of Madras State from other countries of Asia during the decade and (2) the tendency of the nationals of U.K. and U.S.A. to stay in India even after Independence. It also shows the interest that Madrasis used to have in other Asiatic countries more than in North India. This has a historical background. It recalls the significant role played by India in maritime activities. It also recalls the movement of our population in later times in search of work and trade to such countries under the cover of British Empire. This era has ended and the Madrasi will in future turn to North India. Similar details for the districts are given in the table below.

TABLE VII - 2

Number of migrants and proportion per 10,000 of total population in each district by types of migration

Type of migrants	Madras	Chingle-put	North Arcot	South Arcot	Salem	Coimba-tore	Nilgiri	Madurai	Tiruchi-rapalli	Thanjavur	Ramanatha-puram	Tiru-nelveli	Kanya-kumari
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Total population	1,729,141 (10,000)	2,196,412 (10,000)	3,146,326 (10,000)	3,047,973 (10,000)	3,804,108 (10,000)	3,557,471 (10,000)	409,308 (10,000)	3,211,227 (10,000)	3,190,078 (10,000)	3,245,927 (10,000)	2,421,788 (10,000)	2,730,279 (10,000)	996,915 (10,000)
(a) Born in place of enumeration	1,086,313 (6,282)	1,512,064 (6,884)	2,356,172 (7,489)	2,252,753 (7,391)	2,965,884 (7,796)	2,445,043 (6,873)	209,749 (5,124)	2,432,879 (7,576)	2,285,894 (7,165)	2,166,079 (6,673)	1,924,532 (7,947)	2,073,690 (7,595)	800,553 (8,031)
(b) Born elsewhere in the district of enumeration	... (–)	437,141 (1,990)	620,100 (1,971)	617,967 (2,028)	708,661 (1,863)	859,450 (2,416)	37,419 (914)	561,418 (1,748)	610,495 (1,914)	854,807 (2,634)	372,629 (1,539)	579,626 (2,123)	161,529 (1,620)
(c) Born in other districts of the State	447,173 (2,586)	176,772 (805)	118,952 (378)	142,561 (468)	94,586 (249)	156,938 (441)	98,273 (2,401)	194,540 (606)	258,075 (809)	187,495 (578)	112,832 (466)	59,873 (219)	14,476 (145)
(d) Born in adjacent States	146,595 (848)	55,265 (252)	39,063 (124)	28,484 (93)	29,196 (77)	90,083 (253)	59,656 (1,458)	16,082 (50)	18,890 (59)	20,497 (63)	4,477 (18)	11,698 (43)	19,637 (197)
(e) Born in States other than adjacent States	24,670 (143)	6,646 (30)	2,290 (7)	1,587 (5)	1,135 (3)	3,163 (9)	2,234 (55)	1,515 (5)	1,492 (5)	1,445 (4)	471 (2)	1,279 (5)	195 (2)
(f) Born in countries outside India	16,552 (96)	5,791 (26)	5,006 (16)	3,321 (11)	3,561 (9)	2,534 (7)	1,652 (40)	4,471 (14)	13,326 (42)	14,181 (44)	5,488 (23)	4,104 (15)	522 (5)
(g) Born at sea	... (...)	... (...)	... (...)	... (...)	... (...)	11 (N)	... (...)	... (...)	... (...)	2 (N)	... (...)	... (...)	... (...)
(h) Birth place unclassified	7,838 (45)	2,733 (13)	4,743 (15)	1,300 (4)	1,085 (3)	259 (1)	325 (8)	322 (1)	1,906 (6)	1,421 (4)	1,359 (5)	9 (N)	3 (N)

N denotes negligible figures

Though we may have the impression that the population of Madras is rather immobile, an analysis on the basis of districts shows significant variation from district to district. Persons born in place of enumeration range from 51% in Nilgiri to 80% in Kanyakumari. Percentage of persons born in the district but outside the place of enumeration varies from 9% in Nilgiri to 26% in Thanjavur. Persons born in other districts of the State vary from 1% in Kanyakumari to 26% in Madras. The percentage of persons born in adjacent States to total population ranges from 0.02% in Ramanathapuram to 15% in Nilgiri. Among persons born in distant States and enumerated in the districts of Madras State, the percentage varies from 0.02% in Ramanathapuram and Kanyakumari to 1% in Madras. Persons born in countries outside India vary from 0.05% in Kanyakumari to 0.96% in Madras.

Madras has no inter-district migration as the City has been treated as one district. Migration within the other districts forms a considerable component of the migratory population. Nilgiri has the lowest proportion and Thanjavur has the highest. Nilgiri has developed as a result of movement of labour force from outside the district and from outside the State to that area. Thanjavur is an agricultural district and movement of population within the district has been significant. Coimbatore with its expanding industrial economy has witnessed considerable movement of internal population, perhaps to supply labour to industrial enterprises. Two districts which have the greatest proportion of persons born outside the district are Madras and Nilgiri. The movement to Madras is a natural phenomenon as it will attract people from different parts of the State in view of its position as the capital of the State and its industrial and trade importance. Kanyakumari being a small district, mostly non-industrial, has not attracted many people from outside districts. This is also partly due to its geographical position in the extreme south and partly due to the fact that it was part of the Travancore-Cochin State till 1956. In fact more people would be found in Kanyakumari who have moved from the adjacent State of Kerala. Tirunelveli, Salem and North-Arcot which are predominantly agricultural do not attract people from outside districts. Again, Nilgiri, Madras, Coimbatore and Chingleput which lie adjacent to the States of Andhra Pradesh, Mysore and Kerala have a large proportion of their population as persons born in those States. The coastal districts have a greater proportion of persons born in countries outside India which is only natural as children born out of parents gone to outside countries earlier in search of employment or trade have returned to their native land. Also Nilgiri with its large plantations whose ownership rests with foreigners have a sizable proportion of persons born outside India. It is not easy to give any specific reason for the proportion recorded in Tiruchirapalli.

Proportion of 'Home born'

3. It may at this stage be desirable to compare the home born; persons born in the district of enumeration with the figures of earlier Census. The Census figures of 1951 may not represent the exact position as it would exist now as the jurisdiction of some of the districts have undergone changes. The figures still have some significance. The table below gives the proportions of the districts.

TABLE VII - 3

Proportion of persons born in the district of enumeration to total population in 1951 and 1961

District of enumeration	Proportion of home born	
	1951	1961
1	2	3
Madras	595	628
Chingleput	945	887
North Arcot	965	946
South Arcot	962	942
Salem	974	966
Coimbatore	953	929
Nilgiri	546	604
Madurai	940	932
Tiruchirapalli	926	908
Thanjavur	937	931
Ramanathapuram	959	949
Tirunelveli	984	972
Kanyakumari	N.A.	965

For the district of Kanyakumari, the figure could not be collected. Except Madras and Nilgiri where the proportion of home born has

increased, all other districts have recorded less proportion of home born in 1961 compared with 1951. Chingleput has recorded the highest variation in the proportions. As Madras City does not have adequate space to accommodate the new industrial concerns, they have been located in Chingleput. Shortage of house sites in the City and the existence of proper communication facilities with the metropolitan city have encouraged people to migrate to the district and live there. In Salem, Madurai and Thanjavur, the difference in the proportions is insignificant. During the decade, Salem and Thanjavur have not attracted migrants from other districts because of their comparative industrial backwardness. South Arcot has recorded a lesser proportion of home born in 1961. It can to some extent be attributed to the impact of the establishment of Neyveli Lignite Project and its ancillaries-Thermal Plant and Ceramic industries - which has attracted qualified personnel not only from other parts of the State, but also from outside the State and outside India. The fact that the proportion of home born has increased in Madras illustrates that a saturation in its capacity to absorb people has been reached. Further, during this decade with the creation of the States of Andhra Pradesh and Kerala, the number of persons migrating to the City has decreased. Similarly the potentiality of Nilgiri has to some extent been exhausted and as such, it does not attract as many persons to the place as it used to do in the previous decades.

Inter-district migration

4. Out of 447,173 persons born in other districts of the State and enumerated in Madras City, 273,422 have their place of birth in Chingleput, North Arcot and South Arcot. Thanjavur has also contributed a significant number to the population of the City, 47,198 persons. Again, 137,813 out of 176,772 persons born in other districts and enumerated in Chingleput belong to Madras, North Arcot and South Arcot. Thanjavur has contributed 10,033 persons to this district. 67,724 persons born in the district of Madras, Chingleput, North Arcot and Salem have been enumerated in South Arcot. Again, 60,283 persons born in Thanjavur and Tiruchirapalli districts have been enumerated in South Arcot. 83,403 persons out of 156,938 migrants to Coimbatore are from the districts of Madurai, Salem and Nilgiri. Tiruchirapalli has sent 27,388 persons to Coimbatore. The pattern is significant. The bulk of migration is from adjacent districts. The only variation to this general principle is the number of persons which Tirunelveli has sent to Coimbatore, 16,875. The migration to Nilgiri has the following pattern. Out of 98,273 persons, 65,494 hail from Coimbatore and Salem. Tiruchirapalli has contributed 11,667 persons to Nilgiri. The migrants are, therefore, from the nearest districts. 131,202 persons born in the districts of Coimbatore, Tiruchirapalli and Ramanathapuram have been enumerated in Madurai district. Tirunelveli has also contributed 41,228 persons. In Tiruchirapalli, 190,305 persons out of a migrant population of 258,075 persons belong to the districts of South Arcot, Coimbatore, Madurai, Thanjavur and Ramanathapuram. Salem has contributed 44,303 persons. In Thanjavur 139,179 perons born in South Arcot, Tiruchirapalli and Ramanathapuram have been enumerated. Out of 112,832 persons born outside Ramanathapuram, 105, 321 belong to the districts of Madurai, Tiruchirapalli, Thanjavur and Tirunelveli. The districts of Ramanathpuram and Kanyakumari have again contributed 39,355 persons out of 59,873 persons enumerated in Tirunelveli. Madurai has contributed 10,100 persons to Tirunelveli's population. The significant factor to be noticed is that major movement of population is still restricted to the adjacent districts.

Migrants from adjacent States

5. The adjecent States of Madras are Andhra Pradesh, Mysore, Kerala and Pondicherry. Madras, Chingleput, Coimbatore, Nilgiri and Kanyakumari have more than 2% of their population as born in the adjacent States. Madras City is not actually adjacent to any State, but in view of its administrative, industrial and commercial importance and its historical association, people born in the adjacent States are found in large numbers. Out of 171,265 persons born in other States of India, 146,595 persons have been born in the adjacent States. Andhra Pradesh and Kerala have together contributed more than 115,000 persons. Out of 61,911 migrants from other States to Chingleput, 55,265

belong to the adjacent States. More than half of this number were born *in Andhra Pradesh and* 25% in Kerala. Keralites are found in large numbers in Chingleput district which adjoins Madras City. Coimbatore adjoins Kerala and 85% of persons born in other States and enumerated in Coimbatore come from Kerala. This district which has become more and more industrial during the last few decades has attracted a large number of persons from Kerala. It is not *only adjacent to Kerala, but is well linked with it* in trade and commerce. Nilgiri borders both Kerala and Mysore. In this district 71% of persons born outside the State but within India belong to Kerala. 23% belong to Mysore. Administratively Kanyakumari has had greater association with the people of Kerala. Kanyakumari was part of Travancore-Cochin State before it was merged with Madras. As such, more than 95% of people born in other States of India and enumerated in Kanyakumari belong to Kerala.

Migrants from States other than adjacent States

6. The only district which has more than 1% of population as born in non-adjacent States is Madras. The chief contributors are the States of Gujarat (5,447), Maharashtra (4,947), Rajasthan (6,552) and West Bengal (1,997). The persons who were born in these States may be also children born to parents who migrated earlier to these States or persons who have come from those States in pursuit of business and industry. As the most important City in South India, it is not surprising that the last decade has also witnessed a marked movement of population from outside areas to Madras City.

Migrants from foreign countries

7. The districts which have more than 0.4% of its population as born in other countries are Madras, Nilgiri, Tiruchirapalli and Thanjavur. Burma (5,216), Pakistan (4,287), Singapore, Malaya and British Borneo (1,977), Ceylon (1,707) and Nepal (1,152) have made substantial contributions to Madras. Ceylon (567), U. K. (261), Pakistan (239), Nepal (161) and Singapore, Malaya and British Borneo (125) are the important contributors to Nilgiri. Ceylon (7,583), Singapore, Malaya and British Borneo (4,306) and Burma (852) have contributed to Tiruchirapalli. *Singapore, Malaya and British Borneo* (5,613), Burma (4,455) and Ceylon (3,646) are the countries which have contributed to Thanjavur. Madras has naturally attracted persons born in all the continents. Nilgiri because of its climate and tea and coffee estates has attracted people from different countries. Tiruchirapalli was formerly the recruiting base for Ceylon labour force and as such a large number persons of *Ceylonese origin are found there. Again, owing* to the movement of Nattukottai Chettiars to Singapore and Burma for business, persons born in these countries are found in Tiruchirapalli in large numbers. Thanjavur had trade connections with Singapore, Ceylon and Burma through its Muslim population. A large number has been contributed by them.

Migration in rural and urban areas by sex

8. Subsidiary Table D II-3 gives the distri*bution of 10,000 persons enumerated by place of* birth, rural, urban characteristics and sex. The place of birth has been classified as under.

1. Place of enumeration
2. Born within the district
3. Born in other districts within the State
4. Born in other States in India
5. Born outside India with separate details for Nepal, Pakistan and
6. Unclassifiable

The Subsidiary Table has been prepared separately for total, rural and urban. From the Subsidiary Table, I propose to study the migration in the rural sector as well as in the urban sector.

Born in place of enumeration

9. The table below gives the proportions per 10,000 in rural and urban areas.

TABLE VII-4

Proportion of persons born in place of enumeration to 10,000 of total population

State/District	Rural		Urban	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**4,330**	**3,278**	**3,356**	**3,010**
Madras	...	...	3,244	3,039
Chingleput	4,283	2,987	3,022	2,388

TABLE VII - 4 (Contd.)

Proportion of persons born in place of enumeration to 10,000 of total population

State/District	Rural		Urban	
	Males	Females	Males	Females
1	2	3	4	5
North Arcot	4,461	3,181	3,694	3,184
South Arcot	4,488	3,113	3,304	2,669
Salem	4,441	3,499	3,747	3,311
Coimbatore	4,224	3,176	2,964	2,620
Nilgiri	2,644	2,393	2,733	2,504
Madurai	4,370	3,554	3,556	3,269
Tiruchirapalli	4,367	3,141	3,166	2,732
Thanjavur	4,016	2,849	3,202	2,725
Ramanathapuram	4,360	3,790	3,739	3,591
Tirunelveli	4,327	3,604	3,544	3,305
Kanyakumari	4,589	3,561	3,812	3,547

Our study is handicapped by the fact that persons born in the place of enumeration include those who have never left their birth place as well as persons who have been away for longer or shorter periods and have returned to their places of birth. This latter movement has been masked in our data. At the State level, rural areas show a higher proportion of persons born in place of enumeration under both sexes than urban. Again, males are in larger numbers than females in both the sectors. The difference between males and females is greater in rural sector than in the urban areas at the State level as well as in the districts. The table clearly indicates that migration to urban areas is more than to rural. Only in Nilgiri a lesser number of persons born in place of enumeration can be found in the rural areas than in the urban.

In the rural sector, the proportion of males ranges from 4,589 in Kanyakumari to 2,644 in Nilgiri. Among females, the proportion ranges from 2,393 in Nilgiri to 3,790 in Ramanathapuram. In the urban sector, the proportion for males ranges from 2,733 in Nilgiri to 3,812 in Kanyakumari. The female proportion ranges from 2,388 in Chingleput to 3,591 in Ramanathapuram. Lesser number of females show that migration has been caused by marriage, a tendency which is more marked in urban sector than in rural sector. The table also indicates greater movement among females than among males in both the sectors.

Rural and urban migrants from within the district to rural areas

10. The table below presents the proportions.

TABLE VII - 5

Proportion of persons born within the district and enumerated in rural areas to 10,000 of total population

State/District	Born in			
	Rural areas		Urban areas	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**459**	**1,389**	**47**	**80**
Chingleput	457	1,397	47	83
North Arcot	399	1,424	45	88
South Arcot	381	1,506	31	53
Salem	496	1,246	31	51
Coimbatore	646	1,561	59	80
Nilgiri	333	637	74	59
Madurai	445	1,191	45	87
Tiruchirapalli	376	1,443	41	71
Thanjavur	629	1,745	95	153
Ramanathapuram	329	1,081	38	69
Tirunelveli	433	1,338	40	89
Kanyakumari	331	1,178	21	46

In the State as well as in all districts except Nilgiri, the proportions of females are more than those of males both in the case of persons born in rural as well as in urban areas. It indicates a greater tendency for females to move from place to place. In the case of Nilgiri district, while the rural females are more than males, urban female proportion is less than that of males. Movement from rural to rural is greater in both the sexes than urban to rural. This trend is seen in all the districts. Thanjavur district has recorded a higher proportion of persons, born in rural as well as in urban areas who have moved to rural parts, in both the sexes.

Rural and urban migrants from outside the district but within the State to rural areas

11. The table below gives the proportions,

TABLE VII - 6

Proportion of persons born outside the district but within the State and enumerated in rural areas to 10,000 of total population

State/District	Born in Rural areas Males	Born in Rural areas Females	Born in Urban areas Males	Born in Urban areas Females
1	2	3	4	5
Madras State	**88**	**170**	**29**	**40**
Chingleput	95	180	93	140
North Arcot	61	171	22	40
South Arcot	77	199	31	41
Salem	43	92	12	17
Coimbatore	62	85	21	20
Nilgiri	1,283	1,082	201	144
Madurai	83	159	17	25
Tiruchirapalli	116	318	28	42
Thanjavur	139	200	37	51
Ramanathapuram	74	170	24	33
Tirunelveli	30	69	16	23
Kanyakumari	39	54	6	8

At the State level, proportion of persons born in rural areas and enumerated in rural areas is greater than the proportion moving from urban areas. This trend is found in all the districts. Proportion of females who are born in rural and urban areas is greater than the proportion of males in the State in all districts except Nilgiri. In Nilgiri, males predominate both among persons born in rural areas as well as those born in urban areas. The proportion in Nilgiri is much higher than the State average. It can be presumed that the plantations give better and quicker employment to males among persons born in rural areas. Proportions are significant in the districts of Chingleput, South Arcot, Nilgiri, Tiruchirapalli and Thanjavur. Proportions of persons born in urban areas are significant in Chingleput, Nilgiri and Thanjavur. Proportion of persons born in rural areas as well as in urban areas are much lower in Tirunelveli and Kanyakumari thereby indicating that inter-district movement is a negligible factor in the economic life of these two districts. They do not have any significant industrial development and can be classified as purely agricultural. The movement of population from other districts of the State is, therefore, much less. The two districts are situated at the extreme end of the State which may also account for lesser movement of population from other districts.

Rural and urban migrants from other States in India to rural areas

12. The figures are presented in the table given below.

TABLE VII - 7

Proportion of persons born in other States of India and enumerated in the rural areas to 10,000 of total population

State/District	Born in Rural areas Males	Born in Rural areas Females	Born in Urban areas Males	Born in Urban areas Females
1	2	3	4	5
Madras State	**20**	**28**	**10**	**12**
Chingleput	62	94	32	26
North Arcot	12	33	14	22
South Arcot	11	27	10	16
Salem	16	32	5	7
Coimbatore	24	20	11	9
Nilgiri	534	403	116	75
Madurai	5	3	4	3
Tiruchirapalli	4	3	3	3
Thanjavur	9	13	8	12
Ramanathapuram	2	2	2	2
Tirunelveli	5	6	5	6
Kanyakumari	54	70	16	22

Proportions for both the sexes born in rural areas and urban areas are much less than in the two previous categories. At the State level, proportion for females is greater than males in both the groups though the difference is not significant. Chingleput, Nilgiri, and Kanyakumari are prominent in both the groups and have much higher proportions than the State average. Chingleput is bounded by Andhra Pradesh. It is also close to the City of Madras. As such, it has drawn greater number of persons from other States in India. Kanyakumari has significant link with Kerala. The long association which it has enjoyed with Travancore State has naturally resulted in persons born in the present State of

Kerala being enumerated in Kanyakumari. Nilgiri with its plantations and its contiguity to the States of Kerala and Mysore have more persons born in other States of India in that district. Madurai, Tiruchirapalli, Thanjavur, Ramanathapuram and Tirunelveli whose rural areas are really rural in character and situated at a distance from other States have not attracted significantly persons born in other States of India. Even Coimbatore has not received any significant contribution under this category.

Rural and urban migrants from within the district to urban areas

13. The proportion of males and females whose birth places are in rural and urban areas of the district of enumeration and enumerated in urban areas are given in the table below.

TABLE VII - 8

Proportion of persons born within the district and enumerated in urban areas to 10,000 of total population

State/District	Born in			
	Rural areas		Urban areas	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**555**	**714**	**192**	**253**
Madras	...	...	...	...
Chingleput	639	774	250	354
North Arcot	575	838	251	351
South Arcot	721	1,003	288	378
Salem	731	882	190	257
Coimbatore	965	1,085	251	285
Nilgiri	144	186	151	193
Madurai	573	692	196	245
Tiruchirapalli	584	764	234	268
Thanjavur	740	1,090	354	490
Ramanathapuram	480	642	198	286
Tirunelveli	853	1,154	244	366
Kanyakumari	702	949	98	108

At the State level as well as in all districts except Nilgiri, proportions of persons born in rural areas are greater than those born in urban. In Nilgiri, persons born in urban areas are more than the persons born in rural areas. Proportions of females in both the groups are higher than those of males. Movement from rural areas within the district is pronounced in the districts of South Arcot, Salem, Coimbatore, Thanjavur, Tirunelveli and Kanyakumari. In Nilgiri, such movement is much less. In the districts of Chingleput, North Arcot, South Arcot, Coimbatore, Thanjavur and Tirunelveli, movement from one urban area to another within the district is significant. Nilgiri and Kanyakumari have recorded much lower figures in this category.

Rural and urban migrants from other districts within the State to urban areas

14. The table below gives the proportions of persons born in rural and urban areas from other districts within the State and enumerated in urban areas of the districts.

TABLE VII - 9

Proportion of persons born in other districts but within the State and enumerated in urban areas

State/District	Born in			
	Rural areas		Urban areas	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**379**	**351**	**325**	**341**
Madras	819	706	553	507
Chingleput	323	340	590	685
North Arcot	122	127	208	252
South Arcot	269	285	329	392
Salem	131	131	202	222
Coimbatore	323	275	234	227
Nilgiri	717	599	340	351
Madurai	381	360	274	285
Tiruchirapalli	482	503	442	513
Thanjavur	281	255	293	331
Ramanathapuram	232	267	205	261
Tirunelveli	73	74	118	136
Kanyakumari	134	115	86	25

At the State level, rural to urban migrants are greater in proportion than urban to urban migrants. Males are prominent in rural birth places while females are prominent in urban birth places. It is interesting to note that difference in the proportions exhibited by the sexes is considerably less under this category than those exhibited in the earlier categories. Madras,

Nilgiri and Tiruchirapalli urban areas have higher number of persons from rural areas of other districts. North Arcot, Salem, Tirunelveli and Kanyakumari have much lower proportions than the State average. These districts do not attract rural folk from other districts. Madras City with its vast industrial potential and Nilgiri with its plantations and Tiruchirapalli with its communication facilities can give alternate work for moving population from other districts. Madras, Chingleput and Tiruchirapalli districts also have recorded prominent figures for urban migrants. Chingleput is located near the City. New industrial units have sprung up in that area. Again, it has absorbed the overflowing population from the City. Tirunelveli and Kanyakumari do not attract persons from urban areas of other districts.

Rural and urban migrants from outside the State but within India to urban areas

15. The proportions are given in the table below:

TABLE VII - 10

Proportion of persons born in other States of India and enumerated in urban areas to 10,000 of total population

State/District	Born in: Rural areas		Urban areas	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**123**	**87**	**132**	**121**
Madras	280	187	287	235
Chingleput	112	101	170	160
North Arcot	45	48	107	130
South Arcot	45	48	98	140
Salem	32	28	56	64
Coimbatore	243	157	188	162
Nilgiri	719	529	418	336
Madurai	34	21	45	41
Tiruchirapalli	52	33	85	80
Thanjavur	29	19	58	64
Ramanathapuram	9	10	18	21
Tirunelveli	17	16	36	36
Kanyakumari	73	84	118	131

At the State level, persons born in urban areas of other States and enumerated in urban are more than those born in rural areas of other States. Males are predominant in both the birth places and the difference between the sexes is significant in rural born persons. Nilgiri and Coimbatore are exceptions, in that rural born are more than urban born. In Ramanathapuram, North Arcot, South Arcot and Kanyakumari, females predominate in both the groups. Madras, Coimbatore and Nilgiri have shown a high proportion of persons born in rural areas of other States. Coimbatore and Nilgiri are border districts and naturally rural folk from adjacent States have settled in these districts. Madras has also attracted a good proportion of persons born in other States. Madras, Coimbatore and Nilgiri have recorded much higher proportions in both the sexes than the State average in respect of persons born in urban areas of other States of India. Ramanathapuram and Tirunelveli have recorded the lowest proportions. With the exceptions of North Arcot, South Arcot, Salem, Thanjavur, Ramanthapuram and Kanyakumari, all other districts have recorded higher proportions of males than females. Generally, the southern districts of Madras State do not attract much population from outside the State.

Persons born in countries outside India and enumerated in rural and urban areas

16. The table below shows the proportions of persons born in countries outside India and enumerated in the State and districts.

TABLE VII - 11

Proportion of persons born in countries outside India and enumerated in rural/urban areas

State/District	Enumerated in: Rural		Urban	
	Males	Females	Males	Females
1	2	3	4	5
Madras State	**8**	**8**	**23**	**20**
Madras	...	...	55	41
Chingleput	14	5	29	20
North Arcot	7	7	11	9
South Arcot	4	4	14	17
Salem	4	4	8	8
Coimbatore	1	1	12	8
Nilgiri	14	8	26	36
Madurai	4	4	13	14
Tiruchirapalli	19	19	25	27
Thanjavur	19	21	27	30
Ramanathapuram	11	12	9	12
Tirunelveli	4	5	15	13
Kanyakumari	1	2	9	9

At the State level, proportions of persons born in countries outside India are higher in urban than in rural. While the proportions of males and females are equal in the rural sector, males are higher in the urban sector. The difference between the proportions is not much. Nilgiri, Tiruchirapalli, Thanjavur and Ramanathapuram show higher proportions than the State average in the rural sector. Coimbatore and Kanyakumari rural areas show negligible proportions. In the urban sector, Madras, Chingleput, Nilgiri, Tiruchirapalli and Thanjavur have recorded significant proportions. After Madras City, Chingleput and Nilgiri, non-Indians, and foreign born persons are found mostly in the maritime districts of Thanjavur, Ramanathapuram and Tirunelveli. They had trade connections with Burma, Malaya, Singapore, Indo-China and Ceylon. Tiruchirapalli was a recruiting station for Ceylon labour in the past.

Migrants by duration of residence

17. Table D III gives the distribution of migrants by place of birth, rural, urban characteristics of birth place and by duration of residence in place of enumeration. The durations of residence in place of enumeration adopted in the table are:

Less than 1 year
1 - 5 years
6 - 10 years
11 - 15 years
16 + years and
Period not stated

Subsidiary Table D III-1 gives the distribution of 10,000 persons born outside the place of enumeration by place of birth, duration of residence in place of enumeration and sex. The table has been prepared for rural and urban separately.

The discussions that follow are based on the figures presented in Subsidiary Table D III-1.

Rural Migrants

18. At the State level in rural areas, 77.25% of the migrants in rural sector are from other rural areas of the same district, while 5.31% are from urban areas of the same district. 10.61% and 2.88% of the migrants are from other rural and urban areas outside the district of enumeration but within the State. Only about 4% of the migrants are from outside the State. In this are included persons whose birth place could not be classified.

a) **Persons born elsewhere in the district of enumeration**

i) **rural to rural migration**

The highest figure is seen in the duration 16 + years. The second highest figure is under 1-5 years. This trend is found in all the districts. As the period of residence increases, the proportion of females also increases. Marriage may be a significant factor in this migration.

ii) **urban to rural migration**

At the State level, the highest figure is seen under 1-5 years and the next highest figure in 16 + years. Except Nilgiri and Coimbatore where the second highest figure is under less than 1 year, all the other districts exhibit the State pattern. As in the former category, proportion of females increases with each duration, but the difference is not marked as in rural to rural migration at the State level. The migration may be caused by work. .

b) **Rural to rural and urban to rural migration from other districts within the State**

At the State level from rural areas, duration of 16+ years has the highest figure and the next is seen under 1-5 years. Females are greater in all durations except less than 1 year. North Arcot, South Arcot, Salem, Tiruchirapalli, Ramanathapuram, and Tirunelveli follow the State trend. In the other districts except Coimbatore, Nilgiri and Kanyakumari, the highest proportion is seen under 1-5 years and the next highest under 16+ years. In Coimbatore and Kanyakumari, the next highest figure is seen under less than 1 year and in Nilgiri, the second highest figure is under 6-10 years duration. Among urban migrants, duration of 1-5 years has recorded the highest proportion. The same trend as in rural to rural migration is seen among the sexes. All the districts exhibit the State pattern.

c) **Born in rural or urban areas outside the State but within India**

At the State level, the number of migrants

per 10,000 belonging to this group is less than 100. However, in the districts of Chingleput, North Arcot, Nilgiri and Kanyakumari, they have some significance. While most of them in the districts of Chingleput and North Arcot belong to Andhra Pradesh, in Nilgiri, they are from Kerala and Mysore and in Kanyakumari from Kerala. It is only natural that they draw people from the neighbouring States.

Urban migration

19. At the State level, out of 100 persons who are born outside the place of enumeration, 34.93% are born in rural areas of the district of enumeration and 12.22% are born in urban areas of the district of enumeration. 19.88% and 18.07% are born in rural and urban areas of other districts within the State respectively. 5.70% and 6.82% are from rural and urban areas of other States in India. Except in the inter-district migration, the percentage of rural and urban migrants to urban areas is almost equal in terms of percentage. In regard to inter-district migration, rural migrants are nearly three times that of urban migrants.

a) **Rural to urban migrants within the district**

At the State level, the highest figure is noticed under 1-5 years. The second highest is seen in 16+ years. All the districts show the same trend except Nilgiri where the second highest proportion is seen under duration less than 1 year. At the State level except in the duration less than 1 year where males are greater in number than females, in all other durations females are more than males.

b) **Urban to urban migrants within the district**

At the State level, the highest figure is seen under duration 1-5 years and the second highest figure under 16+ years. This trend is exhibited by all the districts. At the State level, females show greater figures than males in all durations.

c) **Rural migrants from outside districts but within the State**

Taking the State as a whole, it is seen that the highest figure is seen in 1-5 years and the second highest in 16+ years. In Madras and Nilgiri the positions are reversed. In Tirunelveli and Kanyakumari, the second position goes to less than 1 year. In all other districts, the trend exhibited by the State is noticed.

d) **Urban migrants from other districts of the State**

At the State level, the highest proportions are seen under 1-5 years. The next highest figure is seen in the duration of 16+ years. The same trend is noticed in all the districts except Nilgiri, Madurai and Thanjavur where the second place goes to duration 6-10 years.

e) **Migrants from rural areas of other States in India**

At the State level, the first place is taken by 1-5 years and the second by 16+ years. All the districts which show figures exhibit the same trend except Chingleput and Nilgiri. In Chingleput while the first place goes to 1-5 years, the second place is taken by 6-10 years. In Nilgiri the first position goes to 16+ years and the second place to 1-5 years. At the State level, males are greater than females in all durations.

f) **Migrants from urban areas of other States**

At the State level, duration 1-5 years has the highest figure and the second place goes to 16+ years. All the districts which show figures follow the State trend except Chingleput. In Chingleput while the first place goes to 1-5 years, the second position is taken by 6-10 years. At the State level, in all durations except 11-15 years, males are greater than females.

Migration to cities in terms of duration of residence

20. Table D V shows for the cities with a population of 100,000 and over, the number of persons born locally, migrants from rural areas and migrants from other towns and cities within India by duration of residence. For purposes of this table, the migrants from Goa, Daman and Diu are treated as born outside India.

Subsidiary Table D V-1 gives the distribution of 1,000 migrants (born in India) to cities by place of birth. The durations of residence

adopted are less than 3 years and more than three years.

The following proportions are noticed in the cities:

TABLE VII-12

Distribution of 1,000 migrants born in India to cities by sex, rural/urban birth place and duration of residence

City	Born in rural areas				Born in urban areas			
	Less than 3 years		More than 3 years		Less than 3 years		More than 3 years	
	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9
Madras	61	49	246	202	52	47	182	161
Madurai	80	64	262	256	44	43	127	124
Coimbatore	92	65	244	209	66	51	143	130
Tiruchirapalli	91	64	216	222	57	53	137	160
Salem	107	92	252	257	48	43	97	104
Tuticorin Town-group	96	80	305	331	26	31	64	67
Vellore Town-group	81	77	182	236	63	70	122	169
Thanjavur	89	97	164	192	78	87	133	160
Nagercoil	130	112	247	313	41	18	71	68

Migrants who have resided in the city of enumeration for less than 3 years form about 36% of migrants when all the 9 cities are put together. The range is from 20.9% in Madras to 35.1% in Thanjavur. Coimbatore (27.4%), Tiruchirapalli (26.5%), Salem (29.0%), Vellore town-group (29.1%) and Nagercoil (30.1%) have greater pull than the cities of Madras, Madurai and Tuticorin town-group. Bulk of the migrants have resided in the cities for more than three years. The pull which Madras had has been counter-balanced by the development of towns in adjoining areas of the city located in Chingleput district. Madurai has also developed urban units in its periphery which has attracted population from outside areas. Tuticorin, though an important commercial and trade centre, has not recorded any significant development as shipping trade has been affected by import restrictions. Coimbatore has recorded phenomenal industrial growth and has pulled a number of people from the neighbouring State of Kerala. With the location of Boiler Plant, Tiruchirapalli has begun developing as an industrial centre. It is an important communication centre. Thanjavur has now become an educational centre with the establishment of new colleges. It is difficult to explain the pull of Salem and Vellore. They do not have much industrial progress which will justify the trend of migration. Nagercoil which is now a district headquarters and linked with Trivandrum and Tirunelveli can easily attract migrants from these

areas. In the duration of residence less than three years, the proportion of females is less than that of males, both in respect of persons born in rural areas as well as those born in urban areas in the cities of Madras, Madurai, Coimbatore, Tiruchirapalli, Salem and Nagercoil. In Vellore and Tuticorin town-groups while the males are larger for those born in rural areas, females are more among persons born in urban areas. In Thanjavur, females are greater in both the categories. The preponderance of males in a number of cities indicates the natural trend for the males to move first and to be found in shorter durations. Primarily it is a movement in search of work. In the category of more than three years, Salem, Tuticorin, Vellore, Thanjavur and Nagercoil have recorded higher figures for females in rural birth places. In urban birth places, Madras, Madurai, Coimbatore and Nagercoil have recorded higher figures under males. In all other cities, more females are seen. The difference in the proportion of sexes in the cities is not, however, significant and we may reasonably conclude that longer the duration of stay in the city, the sex difference tends to equalise.

Age distribution of migrants to cities and comparison with that of the General Population

21. The table below presents the distribution of 1,000 persons among migrants and general population in the cities by broad age-groups and sex.

TABLE VII - 13

Distribution of 1,000 persons among the General Population and migrants by broad age-groups and sex

City	Migrants/ General Population	Total	Age-group 0–14 M	0–14 F	15–34 M	15–34 F	35–59 M	35–59 F	60+ M	60+ F
	2	3	4	5	6	7	8	9	10	11
Madras	M	1,000	79	77	258	225	177	125	29	30
	G.P.	1,000	184	178	195	180	126	95	21	21
Madurai	M	1,000	77	76	221	239	187	149	27	24
	G.P.	1,000	195	192	174	175	124	100	19	21
Coimbatore	M	1,000	90	89	259	220	171	121	24	26
	G.P.	1,000	189	187	199	170	121	91	21	22
Tiruchirapalli	M	1,000	96	91	225	246	153	138	23	28
	G.P.	1,000	182	178	185	181	126	104	21	23
Salem	M	1,000	111	87	201	256	165	128	30	22
	G.P.	1,000	200	195	171	173	117	98	23	23

TABLE VII - 13 (Contd.)

Distribution of 1,000 persons among the General Population and migrants by broad age - groups and sex

City	Migrants/ General Population	Total	Age-group 0–14 M	0–14 F	15–34 M	15–34 F	35–59 M	35–59 F	60+ M	60+ F
1	2	3	4	5	6	7	8	9	10	11
Tuticorin Town-group	M	1,000	85	89	181	217	195	162	34	37
	G.P.	1,000	187	185	163	171	136	111	23	24
Vellore Town-group	M	1,000	89	93	186	261	145	160	30	36
	G.P.	1,000	193	192	170	175	117	102	25	26
Thanjavur	M	1,000	109	102	183	240	142	156	31	37
	G.P.	1,000	189	185	162	170	125	111	29	29
Nagercoil	M	1,000	107	85	191	234	150	153	38	42
	G.P.	1,000	195	193	162	167	117	108	28	30

M=Migrants; G. P.=General Population

It is seen that the proportion of the age-group 0-14 among general population is more than one third of the total. In the migrant population, the proportion is less than 22% in all the cities. Lesser proportion can normally be expected in the younger population for migrants as they generally move to new areas in search of work. The difference in the proportion of sexes is not significant though more males can be found among migrants than in the general population. In the adult age-group of 15-34, proportions exhibited by both the sexes among migrants are much higher than those shown by the general population in all the cities. The difference in figures between the sexes is also much higher. In the general population, the proportion of adults ranges from 32.9% in Nagercoil to 37.5% in Madras. Among migrants, proportion ranges from 39.8% in Tuticorin town-group to 48.3% in Madras. Obviously both in job migration as well as marriage migration, the adult or middle age persons move to new surroundings. It is, therefore, reasonable to expect a higher proportion of adults among migrants. Middle aged persons viz. persons in the age-group 35-59 form less than 25% in all the cities under the general population. The proportion among migrants is less than 36% in all the cities. The range for the general population is from 21.2% in Coimbatore to 24.7% in Tuticorin town-group. Among migrants, the range is from 29.1% in Tiruchirapalli to 35.7% in Tuticorin town-group. The male content is higher among migrants in all cities except Vellore town-group, Thanjavur and Nagercoil. Among the general population, male content is higher uniformly in all the cities. The higher proportion of migrants is due to the movement to new areas by persons in the higher age-groups in search of work or on account of marriages. In the older age-group of 60+, proportions exhibited by migrants are slightly higher

under both sexes than those of the general population in all the cities except Salem where the female proportion is less than that of the general population. Among the general population, proportion of persons in this age-group is less than 6% in all the cities while among migrant population, it is less than 9% in all the cities.

Educational levels for migrants and the General Population in cities

22. The table below presents the distribution of 1,000 persons who are migrants by educational levels and also for the General Population in the cities of the State.

TABLE VII-14

Distribution of 1,000 persons among migrant population and General Population by sex and educational levels in cities

City	Migrants/ General Population	Total		Illiterate		Educational levels: Literate without educational level		Primary or Junior Basic		Matriculation or Higher Secondary		Technical diploma not equal to degree	
		M	F	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Madras	G.P	526	474	160	245	137	108	137	96	71	22	2	N
	M	543	457	124	217	138	95	137	106	113	34	3	...
Madurai	G.P	512	488	151	272	185	126	115	76	50	12	1	N
	M	513	487	109	280	189	106	119	76	76	23	1	...
Coimbatore	G.P	530	470	154	244	163	107	138	95	60	21	2	N
	M	543	457	125	229	166	95	149	104	82	26	2	...
Tiruchirapalli	G.P	514	486	177	281	142	102	120	85	65	16	1	N
	M	497	503	122	261	138	109	125	102	90	25	2	...
Salem	G.P	511	489	221	335	152	87	98	60	34	7	1	N
	M	506	494	190	305	148	96	101	77	55	15	1	...
Tuticorin Town-group	G.P	509	491	168	264	185	130	113	85	37	11	N	N
	M	495	505	137	282	194	132	105	82	49	17	1	...
Vellore Town-group	G.P	505	495	208	318	136	89	111	73	42	13	N	N
	M	450	550	137	323	117	99	109	98	70	27	1	...
Thanjavur	G.P	505	495	177	294	146	108	110	77	62	15	1	N
	M	464	536	127	291	143	128	107	92	70	24	1	...
Nagercoil	G.P	502	498	159	243	188	158	99	75	43	19	1	1
	M	485	515	117	243	174	168	102	80	72	21	1	...

M = Migrants G. P. = General Population N. = Negligible

TABLE VII - 14 (Contd.)

Distribution of 1,000 persons among the migrant population and General Population by sex and educational levels in cities

City	Migrants/ General Population	Non-technical diploma not equal to degree		University degree other than tech. degree		Educational levels: Technical degree or diploma equal to degree or post-graduate degree — Total		Engineering		Medicine		Agriculture		Veterinary & Dairying		Technology		Teaching		Others	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	2	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Madras	G.P.	N	N	16	2	3	1	1	N	1	N	N	...	N	N	N	...	1	1	N	...
	M	...	...	29	4	4	1	2	...	1	...	...	...	...	...	...	...	1	1	...	...
Madurai	G.P.	N	N	9	1	1	1	N	N	N	N	N	N	N	...	N	...	1	1	N	N
	M	...	...	16	2	3	...	1	...	1	...	...	...	...	...	...	...	1	...	...	...
Coimbatore	G.P.	N	N	10	2	3	1	1	N	N	N	1	N	N	...	N	...	1	1	...	...
	M	...	...	16	3	3	...	1	...	...	...	1	...	...	...	...	...	1	...	...	...
Tiruchirapalli	G.P.	N	N	7	2	2	N	N	...	N	N	N	...	N	...	N	...	1	N	1	N
	M	1	...	15	5	4	1	1	...	...	...	...	...	...	...	...	...	1	1	2	...
Salem	G.P.	N	N	4	N	1	N	N	...	N	N	N	...	N	...	...	...	1	N	...	...
	M	...	...	9	1	2	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Tuticorin Town-group	G.P.	N	N	5	1	1	N	N	...	N	N	...	...	N	...	...	...	1	N	...	...
	M	...	...	8	1	1	1	...	...	...	...	...	...	...	...	...	...	1	1	...	...
Vellore Town-group	G.P.	N	N	6	1	2	1	N	...	1	1	N	...	N	...	N	...	1	N	...	...
	M	...	...	11	2	5	1	1	...	3	1	...	...	...	...	...	...	1	...	...	...
Thanjavur	G.P.	N	...	6	1	3	N	1	...	N	N	N	...	N	...	...	...	1	N	1	N
	M	1	...	10	...	5	1	...	...	1	...	...	...	...	...	...	...	2	1	2	...
Nagercoil	G.P.	1	N	8	1	3	1	1	...	N	N	N	N	N	...	...	...	2	1	N	...
	M	1	...	14	2	4	1	1	...	1	...	...	...	...	...	...	...	2	1	...	...

M–Migrants ; G.P.–General Population ; N–Negligible.

The male female proportions among migrants and the General Population may be discussed first. In the General Population in cities, males form more than 50% and males predominate in all the cities. In the case of migrants, in the cities of Madras, Madurai, Salem and Coimbatore males are prominent and show proportions of more than 50% of the total. In the case of other cities, females are prominent. It is only the better developed industrial cities of Madras, Madurai and Coimbatore that show higher male content among migrants while lesser developed centres show higher female content. Proportion of illiterates among migrants range from 109 for

males in Madurai to 190 in Salem. Among females the range is from 217 in Madras to 323 in Vellore town-group. In the General Population, illiterate males range from 151 in Madurai to 221 in Salem. Among females, the proportion varies from 243 in Negercoil to 335 in Salem. Salem shows higher proportion of illiterates in both the sexes both among migrants as well as the General Population. As in the General Population we find more females as illiterates in all the cities.

Illiterates among migrants are lesser than among the General Population in most of the cities of this State. This tendency may be due to the hesitation of the illiterates to move to new places in search of job or work and the educated moves to new places unmindful of the distance to better his future than remain content with what he has in his old place.

In the four cities of Madras, Madurai, Coimbatore and Tuticorin town-group, it is seen that the proportions of males who are simple literates are higher among migrants than among the General Population. In the cities of Tiruchirapalli, Salem, Tuticorin town-group, Vellore town-group, Thanjavur and Nagercoil, literate females show higher figures among migrants than in the General Population. It is seen that in the industrial cities of Madras, Madurai and Coimbatore the proportions of literate females among the General Population are higher than those of migrants while the male literate proportions among migrants are higher than those of the General Population.

Coming to the educational level, Primary or Junior Basic, the proportions exhibited by both the sexes under migrants are higher in all cities except Tuticorin town-group, Vellore town-group and Thanjavur. In Tuticorin town-group, the proportions shown by both the sexes are lower among migrants. In Vellore town-group and Thanjavur, the male proportions are slightly lower, while the female figures are higher among migrants.

The proportions of persons qualified upto Matric or Higher Secondary are definitely higher among migrants than among the General Population in all the cities. The difference in the proportions exhibited by males is rather sharp while for females the difference is not much. It is seen that the proportions exhibited by both the sexes are higher among migrants which indicates that the better qualified persons are the main components of the migrating population.

The proportions of University degree holders are much higher among migrants than among the General Population in all cities. Males exhibit proportions very much higher among migrants compared to General Population. Migrant females in the cities of Madras, Madurai and Tiruchirapalli are more prominent in this group.

Even in the qualification of Technical degree holders, one can see that the proportions shown by migrants are higher than those exhibited by the General Population in all the cities. Except in Tiruchirapalli, Vellore town-group and Thanjavur the difference in the proportions is not very much. Prominent individual technical qualifications relating to migrants as well as the General Population are Engineering, Medicine and Teaching.

Persons born in foreign countries

23. The table below presents the details of persons born in countries which are of importance in respect of Madras State for the Census years 1931, 1951 and 1961. Since data are not available for 1941, figures are not presented for 1941. Figures have been presented for the districts of Madras State excluding Kanyakumari. For Kanyakumari the details are not available. The data presented for the districts are those obtained at the respective Censuses and adjustments have not been made for changes in the territories of respective districts.

TABLE VII - 15

Persons born in foreign countries and enumerated in the districts of Madras State

Country	Year	Madras	Chingle-put	North Arcot	South Arcot	Salem	Coimba-tore	Nilgiri	Madurai	Tiruchira-palli	Thanja-vur	Ramana-thapuram	Tirunel-veli
1	2	3	4	5	6	7	8	9	10	11	12	13	14
ASIA													
Burma	1931	1,041	302	134	92	34	29	121	112	174	425	170	56
	1951	5,740	1,046	420	279	64	191	128	915	678	2,570	2,168	293
	1961	5,216	1,367	476	383	99	421	84	1,323	852	4,455	3,010	409
Ceylon	1931	306	327	240	230	344	118	118	386	1,240	944	355	398
	1951	1,482	338	499	381	1,036	342	320	930	4,353	1,588	1,027	664
	1961	1,707	668	873	558	1,817	469	567	1,446	7,583	3,646	1,293	2,497
Nepal	1931	52	49	4	...	...	1	2	1	3	4	...	1
	1951	668	50	1	10	11	65	8	21	74	33	10	16
	1961	1,152	500	65	40	59	294	161	65	142	103	15	34
Pakistan	1951	5,963	1,153	107	32	219	920	241	287	211	40	25	111
	1961	4,287	854	80	40	215	712	239	144	299	59	11	153
Malaya, Singapore, and North Borneo	1931	284	412	376	365	67	54	16	84	441	614	45	36
	1951	1,098	470	812	534	359	204	22	349	1,463	2,034	726	201
	1961	1,977	1,351	2,979	1,951	1,158	432	125	913	4,306	5,613	1,109	675
AFRICA													
South Africa	1931	150	305	365	36	3	50	6	25	26	14	...	5
	1951	446	83	217	22	10	14	24	19	15	23	2	13
	1961	152	37	153	9	11	...	...	7	7	18	...	15
EUROPE													
U.K.(including N. Ireland)	1931	2,091	577	92	65	118	209	1,608	158	161	39	33	145
	1951	1,026	54	22	34	29	176	463	125	25	3	14	85
	1961	556	52	41	30	39	78	261	123	40	16	6	101
AMERICA													
U. S. A.	1931	33	5	23	...	...	2	16	61	...	...	4	2
	1951	188	62	39	7	3	10	10	140	1	...	1	14
	1961	321	19	73	...	5	12	30	250	2	...	6	9

From the table presented it may be seen that the number of persons born in Burma and enumerated in the districts of Madras State have shown increases over the previous years except in the districts of Madras and Nilgiri. The increase in 1961 over 1951 is striking in respect of Thanjavur and Ramanathapuram.

Persons born in Ceylon have increased in numbers over the previous two Censuses (1951 and 1931). The increase in numbers in Salem, Madurai, Tiruchirapalli, Thanjavur and Tirunelveli is very much.

Persons born in Nepal and enumerated in the districts of Madras State have recorded a phenomenal increase in 1961 over 1951. All the districts listed show increase and the increase in the districts of Madras, Chingleput, North Arcot, Coimbatore, Nilgiri, Tiruchirapalli and Thanjavur is worth mentioning.

In respect of persons born in Pakistan and enumerated in the districts, it is seen that their numbers in 1961 have decreased from those of 1951 in all the districts except South Arcot, Tiruchirapalli, Thanjavur and Tirunelveli.

Persons born in Malaya, Singapore, etc. have shown increased numbers in 1961 than those in 1931 and 1951 in all the districts under consideration. All the districts have shown quite a good increase and the districts of Madras, Chingleput, North Arcot, South Arcot, Salem, Tiruchirapalli and Thanjavur are to be specially mentioned.

Persons born in Africa have shown decreases in all the districts except Salem and Tirunelveli. Persons born in United Kingdom including N. Ireland have shown increases in the districts of North Arcot, Salem, Tiruchirapalli, Thanjavur and Tirunelveli. In all other districts they show decreases. The decrease is very much in Madras, Coimbatore and Nilgiri.

Persons born in U.S.A. and enumerated in the districts, show increases in most of the districts. In Chingleput, South Arcot and Tirunelveli they show decreases. The increase in Madras and Madurai is striking.

The increase in the number of persons born in Burma, Ceylon, Singapore and Malaya etc. may be due to the return of children born to Madrasis settled in the earlier decades in those countries in view of the restrictions imposed for Indians becoming citizens of those countries after these countries attained independence. When the parents decide to return normally the children also move with them.

It is also possible that parents of Madras region have sent their children in advance for education to their homeland. Owing to the unsettled conditions of Indians in Burma and Ceylon chiefly due to the non-confirment of citizenship rights during the present decade, Indians have to leave their properties and return to their homeland. For a large number of years, Madras under the British administration had contacts with those countries. As India and those countries formed part of the British Empire, movement was free. Independence has no doubt created a feeling that every country is primarily intended for its people only. Active restrictions have been imposed on movement of Indians to Burma. They have passport restrictions for entry of Indians into Burma which was introduced as early as 1-9-1950. Till then the Indian evacuees from Burma who were in possession of evacuee identity certificates were permitted to return to Burma on production of those certificates. But with effect from 31-12-1950 even such persons were subjected to restrictions. Emigrants to Burma came mostly from Thanjavur and Ramanathapuram and as such, these districts have recorded increased numbers under birth place statistics. The increase in the number of persons born in Nepal may be due to the larger employment of Gurkhas by institutions, firms and private persons for watch and ward work. The Gurkhas after getting familiar with the surroundings invite members of their families as well as neighbours from Nepal for settlement. It is a regular feature of the life of the City to find Gurkhas as watchmen in big industrial establishments and firms. One can also see three or four Gurkhas joining together and do patrolling of streets in the nights and collect 50 Paise to Re. 1/- from each household. The decrease in the number of Pakistan born persons may be due to their temporary stay in India being terminated and their returning to Pakistan during the decade 1951-61. Further, families of Pakistan nationals who remained in India in 1951 might have returned later to Pakistan to join their menfolk. The decrease of persons born in South Africa in most districts may be due to the return of temporary migrants to their homeland. There

is also the possibility of the return of South African born Indians to South Africa to acquire nationality and exercise their franchise. The decrease of U. K. born persons in the districts of Madras, Coimbatore, and Nilgiri may be due to the return of Englishmen and their families who were employed in firms. In Nilgiri and Coimbatore, Englishmen had vested interest in plantations. After Independence, they have tended to move to their home country disposing of their interest to the local people. The increase in the number of persons born in U.S.A. indicates the larger participation of Americans in the industrial and economic growth of the State after Independence. Nowadays more Americans do come and stay in India in technical co-operation projects under various aid schemes and also as promotors of industrial establishments in collaboration with local enterpreneurs.

Emigrants to Malaya and Singapore generally belong to the districts of North Arcot, South Arcot, Salem, Tiruchirapalli, Thanjavur and Madurai. 1951 Census has recorded the return of a large number of Indians to India in the post-war era. This, along with the loss of lives of Indian labourers during the Japanese occupation has resulted in the fall of Indian population in Malaya. Similarly, a large number of persons born in Malaya and Singapore have been returned as enumerated in the districts indicated above. Similar is the fate of Indians domiciled in Ceylon. Right for Franchise has been denied to them and under the Ceylon Citizenship Act and the Ceylon Immigrants and Emigrants Act, every person desiring an entry into Ceylon has to possess a valid passport and a residence permit, temporary or permanent. Again, emigrants to Ceylon hail largely from the Tamil districts of South India, the important districts being Tiruchirapalli, Salem, North Arcot, South Arcot, Ramanathapuram, Thanjavur, Madurai, Tirunelveli and Chingleput. Salem, Madurai Tiruchirapalli, Thanjavur and Tirunelveli have recorded more number of persons as born in Ceylon.

Non-Indian nationals

24. The table below presents figures of nationals of important countries with sex break-up. As no comparable data can be had for Kanyakumari disrtrict, they have not been included. Nor does the table take into account the changes in the jurisdiction of the districts.

TABLE VII-16

Non-Indian nationals in the Censuses of 1951 and 1961

Nationality	1961		1951	
	Males	Females	Males	Females
1	2	3	4	5
ASIA				
Afghanistan	9	...	21	1
Burma	240	160	380	627
Ceylon	492	304	424	447
China	56	55	74	21
Indonesian	465	14	...	1
Nepal	648	100	95	7
Japanese	106	5	3	2
Pakistan	350	109	338	227
Malayan	359	286	234	195
U.S.S.R.	11	24	10	1
EUROPE				
Danish	12	21	59	22
U. K.	691	723	1,069	1,057
Irish	14	69	25	61
French	72	115	169	196
Portuguese	59	22	114	32
Italian	99	27	53	54
Spanish	11	19	42	20
Sweedish	25	29	17	42
Belgian	7	48	2	25
Norwegian	3	4	8	4
Finnish	...	1	4	...
Greek	66	3	20	9
German	107	70	61	43
AMERICAS				
Canada	34	49	7	13
U. S. A.	281	257	225	202
AUSTRALASIA				
Australian	21	33	16	32
Newzeland	5	4	...	8

1961 Census has recorded an appreciable increase in the number of nationals of Indonesia, Nepal, Japan, Malaya and Singapore, U.S.S.R., Belgium, Greece, Germany, Canada, United States

of America and Australia. India has after Independence developed diplomatic ties with these countries. Trade agencies have also established by these countries in India. Naturally, an upward trend in their numbers has to be expected. The high increase in the number of Indonesians may be due to the presence of Air Force trainees of Indonesia in the Air Force Training Centres in Madras State - Tambaram and Coimbatore. This view is confirmed by the high male content of the Indonesian nationals. As observed earlier, increasing employment of Gurkhas for watch and ward work has resulted in the increase of Nepalese nationals. Belgian nationals have recorded an increase, especially among females. They are found chiefly in Madurai and Ramanathapuram. Greek nationals are found in Madras City - perhaps the crew of some sailing vessel that touched Madras Port during the enumeration in February - March 1961. German nationals are found in Madras, South Arcot, Nilgiri, Madurai and Tirunelveli. In the Neyveli Lignite Project, a fertilizer plant is being set up with German co-operation. In Madras, a large number of trade representatives are found. In Madurai and Tirunelveli, the Christian missions are active. German nationals can be found in convents and Jessuit Educational and Technical Institutions. In Nilgiri, German nationals have been found even in 1951. Canadian nationals were found in the districts of Coimbatore, Madurai and Nilgiri in 1951. The same pattern is observed in 1961 also. In addition, Madras and Tirunelveli have recorded Canadian nationals. Canada has been of great help to Madras State in establishing the Kundah Hydro-Electric Project and Canadian technicians have been associated with it. Madurai has also recorded a few Canadian nationals. U.S. nationals are found prominently in Madras and Madurai. Madras has a number of American businessmen and executives of American firms. Madurai as the headquarters of American Mission might have a number of Americans employed in the Mission as well as in the American College. But most of the American nationals are found in Kodaikanal area which is an important tourist centre and it is likely that they have been enumerated as tourists. The depletion of U.K. nationals is striking. It is likely that with the transfer of power from the British to Indians, a number of U. K. citizens who were employed in the districts in Government service and in private sector have left the country and returned to their home land. Burmese nationals who were found in 1951 in the districts of Madurai and Nilgiri have decreased in numbers. Probably they have left for Burma. The most striking feature is that in South Arcot 32 males and 274 females were found in 1951 as Burmese nationals. But in South Arcot, only 10 males and a dozen females are to be seen today. I think the figures of 1951 can be an error of enumeration.

Comparative figures of persons born in foreign countries and nationals of foreign countries

25. The table below presents the number of foreign born persons and nationals of foreign countries recorded in the Censuses of 1931, 1951 and 1961 by country of origin. No adjustment has been made to the changes in jurisdiction. Only important countries have been selected and figures presented for them.

TABLE VII - 17

Indian and foreign nationals by country of origin in the State in 1961, 1951 and 1931

(*the area of 1931 relates approximately to that of 1951–61*)

Name of foreign country	Persons born						Nationals					
	1961		1951		1931		1961		1951		1931*	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
1	2	3	4	5	6	7	8	9	10	11	12	13
Burma	8,673	9,422	7,081	7,411	1,289	1,424	240	160	380	627	...	...
Ceylon	11,361	11,763	6,600	6,360	3,185	2,726	492	304	424	447	...	...
Federation of Malaya and Singapore	10,918	11,671	4,356	3,916	1,484	1,473	359	286	234	195	...	...
Nepal	2,217	413	850	117	106	11	648	100	95	7	...	...
Pakistan	4,250	2,843	5,478	3,831	...	...	350	109	338	227	...	...
United Kingdom	638	704	1,289	767	3,663	1,635	691	723	1,069	1,057	...	...
South Africa	232	177	491	397	497	488	20	19	...	...	...	...
United States of America	429	298	259	216	68	78	281	257	225	202	...	...

* Data not available.

This table will demonstrate how useless comparing birth place be to determine nationality. Most of the persons born in foreign countries are not nationals of those countries. This may be due to the children born to parents of Indian or foreign origin in another country where they were staying with their parents and later returning to their native country without acquiring the nationality of the country in which they were born. Even foreign born persons can acquire nationality of a different country in which they settle down. A number of persons born in East Asian countries of Burma, Federated States of Malaya and Singapore, Ceylon and Pakistan have been enumerated in Madras. Burma and Pakistan were part of India and as such, the number born in these territories could be numerous. India had also good neighbourly relations with Federated Malay States, Singapore and Ceylon where Indian labour found favourable conditions for employment. But independence of these countries has resulted in their returning in large numbers to India.

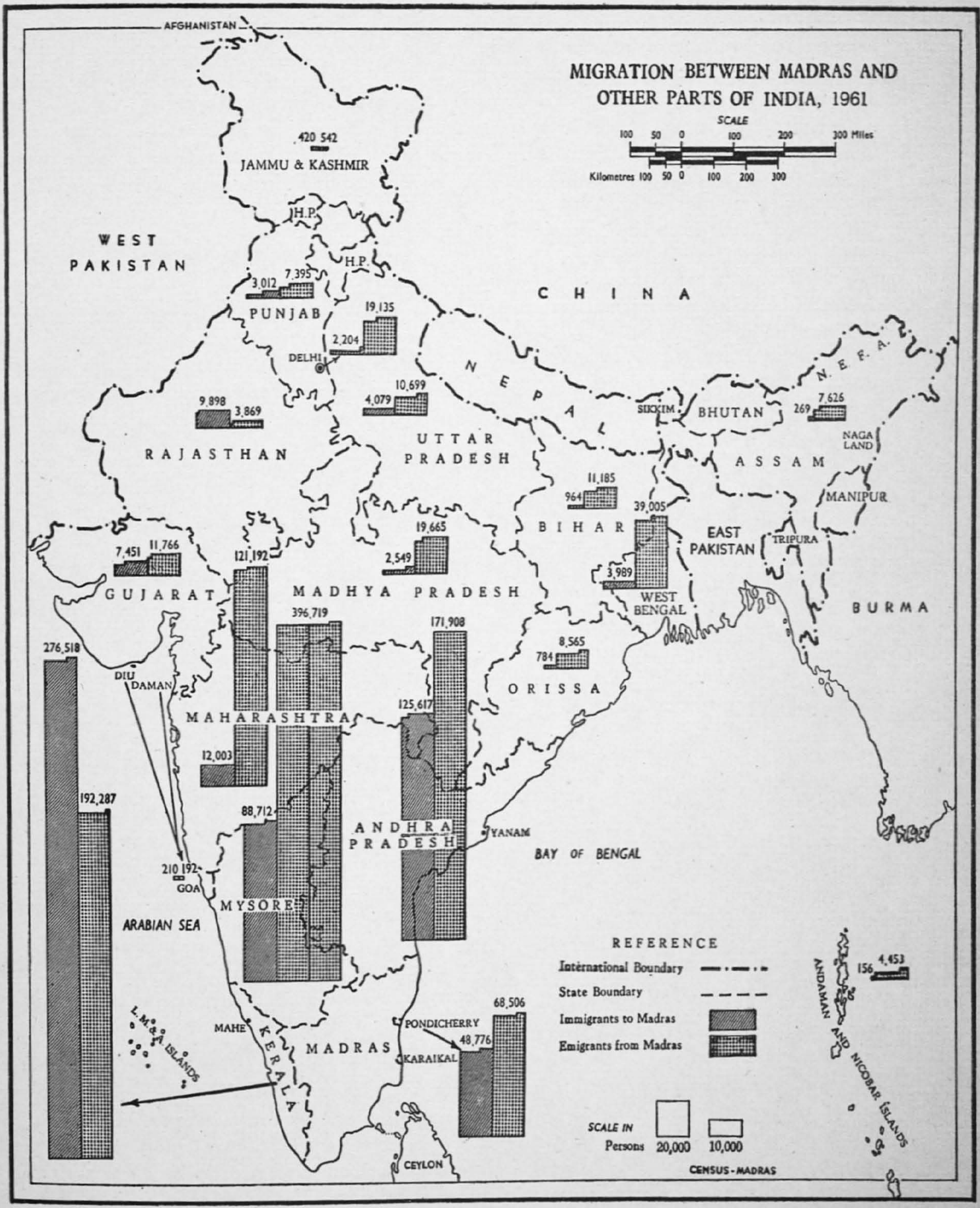
Immigrants and emigrants from and to other States

26. Table VII - 18 gives the figures of persons who have migrated to other States and Union territories and those who have come to Madras from other States and Union territories.

TABLE VII - 18

Immigrants and emigrants from and to other States and Union Territories

State/Union Territory	Number migrated to Madras			Number migrated from Madras			Net migration Immigration (+) Emigration (−)
	P	M	F	P	M	F	P
1	2	3	4	5	6	7	8
Andhra Pradesh	125,617	55,466	70,151	171,908	79,388	92,520	− 46,291
Assam	269	165	104	7,626	4,942	2,684	− 7,357
Bihar	964	555	409	11,185	6,689	4,496	− 10,221
Gujarat	7,451	4,249	3,202	11,766	7,398	4,368	− 4,315
Jammu & Kashmir	420	292	128	542	316	226	− 122
Kerala	276,518	162,331	114,187	192,287	101,031	91,256	+ 84,231
Madhya Pradesh	2,549	1,182	1,367	19,665	12,251	7,414	− 17,116
Maharastra	12,003	6,411	5,592	121,192	74,109	47,083	− 109,189
Mysore	88,712	40,304	48,408	396,719	210,377	186,342	− 308,007
Orissa	784	408	376	8,565	5,390	3,175	− 7,781
Punjab	3,012	2,019	993	7,395	5,318	2,077	− 4,383
Rajasthan	9,898	6,264	3,634	3,869	2,439	1,430	+ 6,029
Uttar Pradesh	4,079	2,580	1,499	10,699	6,548	4,151	− 6,620



MIGRATION BETWEEN MADRAS AND OTHER PARTS OF INDIA, 1961
SCALE
100 50 0 100 200 300 Miles
Kilometres 100 50 0 100 200 300
AFGHANISTAN
420 542
JAMMU & KASHMIR
H.P.
WEST PAKISTAN
3,012 7,395
PUNJAB
19,135
2,204
DELHI
CHINA
NEPAL
10,699
4,079
9,898 3,869
RAJASTHAN
UTTAR PRADESH
SIKKIM
BHUTAN
269 7,626
N.E.F.A.
NAGA LAND
ASSAM
MANIPUR
11,185
964
BIHAR
39,005
EAST PAKISTAN
TRIPURA
3,989
WEST BENGAL
BURMA
19,665
2,549
7,451 11,766
GUJARAT
121,192
MADHYA PRADESH
396,719
171,908
8,565
784
ORISSA
276,518
DIU
DAMAN
125,617
MAHARASHTRA
12,003
192,287
88,712
ANDHRA PRADESH
YANAM
BAY OF BENGAL
210 192
GOA
MYSORE
ARABIAN SEA
REFERENCE
International Boundary
State Boundary
Immigrants to Madras
Emigrants from Madras
156 4,453
ANDAMAN AND NICOBAR ISLANDS
68,506
PONDICHERRY
48,776
KARAIKAL
MAHE
KERALA
MADRAS
L.M.&A. ISLANDS
SCALE IN Persons 20,000 10,000
CEYLON
CENSUS-MADRAS

TABLE VII - 18 (Contd.)

Immigrants and emigrants from and to other States and Union Territories

State/Union Territory	Number migrated to Madras			Number migrated from Madras			Net migration Immigration(+) Emigration(—)	
	P	M	F	P	M	F		P
1	2	3	4	5	6	7		8
West Bengal	3,989	2,183	1,806	39,005	23,630	15,375	—	35,016
Andaman and Nicobar Islands	156	80	76	4,453	3,623	830	—	4,297
Delhi	2,204	1,361	843	19,135	10,711	8,424	—	16,931
Himachal Pradesh	113	50	63	68	44	24	+	45
Laccadive, Minicoy & Amindivi Islands	8	8	...	47	27	20	—	39
Manipur	8	8	...	21	12	9	—	13
Tripura	5	4	1	65	42	23	—	60
Dadra & Nagar Haveli	...	...	...	6	3	3	—	6
Goa, Daman & Diu	210	140	70	192	140	52	+	18
Pondicherry	48,776	18,114	30,662	68,506	21,909	46,597	—	19,730
N.E.F.A.	...	...	...	528	515	13	—	528
Nagaland	...	...	...	120	104	16	—	120
Sikkim	...	...	...	26	23	3	—	26
Total	**587,745**	**304,174**	**283,57**	**1,095,590**	**576,979**	**518,611**	—	**507,845**
						M	**(—)**	**272,805**
						F	**(—)**	**235,040**

Madras exports persons to other parts of India. The net emigration to other States and Union territories is 507,845 persons comprising of 272,805 males and 235,040 females. Immigrants are 587,745 persons comprising of 304,174 males and 283,571 females while emigrants number 1,095,590. Kerala (84,231) and Rajasthan (6,029) have sent more people to Madras than they have received. Andhra Pradesh (46,291), Mysore (308,007), Maharashtra (109,189), West Bengal (35,016), Delhi (16,931), Pondicherry (19,730), Madhya Pradesh (17,116), Bihar (10,221), Orissa (7,781) and Assam (7,357) have received more persons from Madras State than they have sent to Madras. Punjab, Uttar Pradesh, Gujarat, Andaman and Nicobar Islands also fall in this category.

Sex ratio in the actual population and immigrant and emigrant populations

27. The table presented below gives the sex ratio (females per 1,000 males) in the actual population, immigrants and emigrants from and to other States in India. The immigrant and emigrant population have been divided into two categories (1) adjacent States and (2) other than adjacent States.

TABLE VII-19

Sex ratio in the rural and urban areas of the State

Description	Total	Rural	Urban
1	2	3	4
Actual population of the State	992	1,003	963
Immigrant population from adjacent States	954	1,341	821
Immigrant population from States other than adjacent States	721	507	770
Emigrant population from State to adjacent States	1,010	1,121	908
Emigrant population from State to States other than adjacent States	620	591	624
Natural population	990	1,002	957

Immigrant population from adjacent States has a favourable sex ratio in the rural sector. Emigrant population to adjacent States exhibits a favourable sex ratio in the total and rural sectors. Even the ratio in the urban sector is better than that shown by the immigrant population from adjacent States. The favourable sex ratio in the rural sector of both the immigrant and emigrant population of adjacent States can be explained by the consideration that movement has taken place by social factors like marriage, visits and fairs and festivals. Immigrant population from States other than adjacent States show a low sex ratio in the rural sector when compared with the urban. Similar is the case of emigrants from State to States other than adjacent States. The low sex ratio in the rural sector can be explained by persons moving to distant places in search of work, leaving their families behind. Again, the male may be employed in remote areas without residential or industrial facilities. The shifting of a family with school going children is a new problem today and is rather serious in the rural areas where educational facilities in other languages are not available. These factors might have depressed the sex ratios in the rural sector to a great extent. The sex ratio in the general population is higher than in the migrating population in all the three sectors.

Immigrants from other States and territories compared with the State/Predominant language of the State of origin

28. The table below presents the number of immigrants from other States and territories and the number of persons speaking the State/Predominant language of the State of origin.

Table VII - 20

Immigrants into the State from other States compared to the language returns for the State/Predominant language of the respective States

(Figures in Thousands)

State of Origin	Immigrants into the State		Population speaking the State/Predominant language of the State of origin as mother-tongue		State/Predominant language
	Males	Females	Males	Females	
1	2	3	4	5	6
Andhra Pradesh	56	70	1,688	1,676	Telugu
Assam	N	N	N	N	Assamese
Bihar	1	N	22	17	Hindi
Gujarat	4	3	10	8	Gujarati
Jammu & Kashmir	N	N	314	301	Urdu
Kerala	163	114	227	172	Malayalam
Madhya Pradesh	1	1	22	17	Hindi
Maharashtra	6	6	26	25	Marathi
Mysore	40	49	429	424	Kannada
Orissa	1	N	N	N	Oriya
Punjab	2	1	22	17	Hindi
			2	1	Punjabi
Rajasthan	6	4	22	17	Hindi
Uttar Pradesh	3	1	22	17	Hindi
West Bengal	2	2	2	1	Bengali
Andaman & Nicobar Islands	N	N	...	...	Nicobarese
Delhi	1	1	22	17	Hindi
Himachal Pradesh	N	N	N	N	Pahari
Laccadive, Minicoy & Amindivi Islands	N	...	227	172	Malayalam
Manipur	N	...	N	N	Manipuri
Tripura	N	N	2	1	Bengali
Goa, Daman & Diu	N	N	2	2	Konkani
Pondicherry	18	31	14,022	13,989	Tamil

N represents negligible figures.

I have earlier discussed whether the place of birth data can be compared with that of nationality. I will now attempt a comparison of the birth place returns and mother-tongue returns. For this purpose, the States and Union territories only have been considered. The language spoken as mother-tongue in the State which has sent persons to Madras and the number of persons speaking that language has been exhibited. In the majority of cases, the number of immigrants are much less than the persons speaking the language. In a few cases, the returns are nearly equal. Further, a single language like Hindi is the predominant language in a number of States. As such, it is not possible to distribute the speakers of Hindi among different States of origin. Madras is an educated State. The people are inclined to travel far and wide to seek their fortune. It is much less industrialised than the States of Maharashtra and Bengal. As such, there has been a constant movement of persons to other industrial regions in India in search of work, especially Bombay, Delhi and Bengal. Major part of Andhra Pradesh and part of Kerala were within the composite Madras State. Some parts of Mysore (South Canara and Bellary) formed part of Madras till 1956. Further, Madras City has acted as the cultural centre of South India. As such, people from these areas have settled in Madras State and taken root. Again, the domination of Vijayanagar dynasty followed by the Maratha and Muslim rulers from the north have brought many nationalities to Madras State who have become permanent residents without giving up their language. Again, the children born to emigrants to North India might have returned to their home State. The children born to immigrants speak the language of their parent State while they are not treated as migrants. These factors contribute to the wide divergence in the figures presented in the table given above. The language returns and the place of birth data cannot be easily compared especially in a State like Madras.

Migration to rural areas from the rural areas of other States

29. The table given below presents the percentage of rural immigrants from rural areas of other States of India to the rural population of the State and districts separately for each sex. Figures have been given in thousands for migrants to rural areas of the State and districts classified under two broad categories-1) those from adjacent States and 2) those from States other than adjacent States.

TABLE VII-21

Immigration in rural areas of the State from rural areas of other States of India classified by sex

(In Thousands)

State/District	Rural population		Immigrants into rural areas from rural areas of adjacent States		Immigrants into rural areas from rural areas of States other than adjacent States		Immigrants into rural areas from rural areas of States of India		Percentage of rural immigrants from rural areas of States of India to rural population	
	M	F	M	F	M	F	M	F	M	F
	2	3	4	5	6	7	8	9	10	11
Madras State	**12,331**	**12,365**	**48**	**68**	**2**	**N**	**50**	**68**	**0·41**	**0·55**
Chingleput	886	855	9	16	2	N	11	16	1·21	1·92
North Arcot	1,264	1,251	3	8	N	N	3	8	0·24	0·66
South Arcot	1,337	1,319	3	7	N	N	3	7	0·22	0·54

TABLE VII-21 (Contd.)

Immigration in rural areas of the State from rural areas of other States of India classified by sex

(In Thousands)

State/District	Rural population		Immigrants into rural areas from rural areas of adjacent States		Immigrants into rural areas from rural areas of States other than adjacent States		Immigrants into rural areas from rural areas of States of India		Percentage of rural immigrants from rural areas of States of India to rural population	
	M	F	M	F	M	F	M	F	M	F
	2	3	4	5	6	7	8	9	10	11
Salem	1,609	1,578	5	10	N	N	5	10	0·32	0·65
Coimbatore	1,275	1,250	6	5	N	N	6	5	0.47	0·40
Nilgiri	119	110	12	9	N	N	12	9	10·27	8·40
Madurai	1,092	1,104	1	1	N	N	1	1	0·10	0·06
Tiruchirapalli	1,244	1,268	1	1	N	N	1	1	0·08	0·06
Thanjavur	1,280	1,304	2	3	N	N	2	3	0·17	0·25
Ramanathapuram	882	940	N	1	N	N	N	1	0·05	0·03
Tirunelveli	915	967	1	1	N	N	1	1	0·10	0·11
Kanyakumari	428	419	5	6	N	N	5	6	1·06	1·42

N represents negligible figures.

Rural immigrants from rural parts of other States form a negligible proportion of the rural population of the State, 0·41 for males and 0·55 for females. Nilgiri, Chingleput and Kanyakumari have shown percentages above 1% for both males and females. They are closely linked with the neighbouring States of Andhra Pradesh and Kerala and rural migration across the border is a common feature. Nilgiri, the plantation district has naturally attracted men and women for plantation labour from other districts of the State and other States. Nilgiri borders Kerala and is well linked with Kerala and Mysore. The district is small and as labour force mainly come from outside, the proportion recorded is high, 10.27% for males and 8·40% for females. The bulk of the rural migration is contributed by adjacent States. Among females, migration from rural areas of distant States is negligible as against 68,000 from adjacent States.

The percentage figures for females are higher than those of males in the State as a whole and in all the districts except Coimbatore, Nilgiri, Madurai, Tiruchirapalli and Ramanathapuram. The higher figures among males can be explained by the migration of males in search of employment in the rural parts of such districts.

Migration to urban areas from urban areas of other States

30. Table VII-22 correspondingly shows immigrants classified by sex from urban areas of other States of India to urban areas of Madras State in 1961.

TABLE VII-22

Immigrants in urban areas of the State from urban areas of other States of India classified by sex

(In Thousands)

State/District	Urban population		Immigrants into urban areas from urban areas of adjacent States		Immigrants into urban areas from urban areas of States other than adjacent States		Immigrants into urban areas from urban areas of States of India		Percentage of urban immigrants from urban areas of States of India to urban population	
	M	F	M	F	M	F	M	F	M	F
1	2	3	4	5	6	7	8	9	10	11
Madras State	**4,580**	**4,411**	**103**	**96**	**16**	**13**	**119**	**109**	**2·58**	**2·46**
Madras	910	819	40	33	9	8	49	41	5·45	4·95
Chingleput	235	221	7	6	1	1	8	7	3·30	3·31
North Arcot	318	313	6	8	1	1	7	9	2·13	2·61
South Arcot	199	194	4	5	N	1	4	6	1·93	2·85
Salem	315	303	3	4	N	N	3	4	1·09	1·31
Coimbatore	535	497	18	16	1	1	19	17	3·63	3·35
Nilgiri	95	85	7	5	1	1	8	6	7·94	7·08
Madurai	515	501	4	4	1	N	5	4	0·89	0·84
Tiruchirapalli	344	334	5	5	1	N	6	5	1·68	1.63
Thanjavur	330	331	3	4	1	N	4	4	1·16	1·27
Ramanathapuram	294	306	1	1	N	N	1	1	0·36	0·40
Tirunelveli	415	432	3	3	N	N	3	3	0·72	0·71
Kanyakumari	75	75	2	2	N	N	2	2	2·34	2·64

N represents negligible figures.

Among the urban immigrants from urban areas of other States, the proportion of both males and females is much higher, 2·58% for males and 2·46% for females as compared to rural figures. Among the rural migrants from the rural areas of other States for the State as a whole, the percentage of males is lower than that of females while among the urban immigrants from urban areas of other States, percentage of females is lower than that of males. Higher percentage of

males than females is noticed in the districts of Madras, Coimbatore, Nilgiri, Madurai, Tiruchirapalli and Tirunelveli. Among the 119 thousand males in the urban immigration, 103 thousands belong to adjacent States. Among females, 96 thousand out of 109 thousand come from adjacent States. Nilgiri and Madras have shown high percentages for both males and females -5% and over. Chingleput, North Arcot, Coimbatore, South Arcot and Kanyakumari have recorded percentages between 2 and 4. Salem, Tiruchirapalli and Thanjavur have percentages in the range of 1—2. Madurai, Ramanathapuram and Tirunelveli have figures of less than 1%. As industrial districts, the immigrant population from urban areas is high in Madras and Coimbatore. I have earlier indicated that the proportion of home born in Madras City has increased from 1951 to 1961. It is because of the development of urban sectors in Chingleput district on the outer fringes of the City which have also attracted a good proportion. South Arcot has attracted a large number of outsiders because of the location of Neyveli Lignite Corporation. Kanyakumari has shown a high figure in spite of the fact that it is not industrialised. By virtue of its connection with Kerala of which it was formerly part, it has attracted outsiders. Further, as Nagercoil has become the headquarters of the new district, it may have attracted families of officials.

Immigration from other States of India into the State classified by sex

31. The table presented below is a comprehensive table indicating the extent of in-migration into the State and districts. The in-migrants from all the States grouped under two broad heads have been expressed as a percentage of population in the three sectors—total, rural and urban separately for each sex.

TABLE VII - 23

In-migration from other States of India into the State classified by sex, expressed as percentages of total, rural and urban population of the State, 1961

State/District		Total population	Percentage of total immigration from other States of India to actual population of State			Percentage of immigration from States adjacent to the State to actual population of State			Percentage of immigration from States other than those adjacent to State to actual population of State		
			T	M	F	T	M	F	T	M	F
1		2	3	4	5	6	7	8	9	10	11
Madras State	**T**	**33,686,953**	**1·74**	**1·80**	**1·69**	**1·60**	**1·63**	**1·57**	**0·14**	**0·17**	**0·12**
	R	**24,696,425**	**0·70**	**0·61**	**0·78**	**0·67**	**0·57**	**0·76**	**0·03**	**0·04**	**0·02**
	U	**8,990,528**	**4·62**	**5·00**	**4·23**	**4·17**	**4·50**	**3·83**	**0·45**	**0·50**	**0·40**
Madras	U	1,729,141	9·91	10·80	8·91	8·48	9·24	7·63	1·43	1·56	1·28
Chingleput	T	2,196,412	2·82	2·60	3·05	2·52	2·19	2·86	0·30	0·41	0·19
	R	1,740,734	2·14	1·84	2·44	1·90	1·49	2·32	0·24	0·35	0·12
	U	455,678	5·43	5·47	5·40	4·88	4·83	4·93	0·55	0·64	0·47

TABLE VII-23 (Contd.)

In-migration from other States of India into the State classified by sex, expressed as percentages of total, rural and urban population of the State, 1961

State/District		Total population	Percentage of total immigration from other States of India to actual population of State			Percentage of immigration from States adjacent to the State to actual population of State			Percentage of immigration from States other than those adjacent to State to actual population of State		
			T	M	F	T	M	F	T	M	F
1		2	3	4	5	6	7	8	9	10	11
North Arcot	T	3,146,326	1·31	1·03	1·61	1·24	0·95	1·54	0·07	0·08	0·07
	R	2,515,101	0·82	0·52	1·12	0·79	0·49	1·09	0·03	0·03	0·03
	U	631,225	3·30	3·02	3·57	3·05	2·76	3·33	0·25	0·26	0·24
South Arcot	T	3,047,973	0·99	0·74	1·24	0·94	0·68	1·19	0·05	0·06	0·05
	R	2,655,651	0·64	0·43	0·86	0·63	0·41	0·85	0·01	0·02	0·01
	U	392,322	3·32	2·82	3·83	3·01	2·50	3·54	0·31	0·32	0·29
Salem	T	3,804,108	0·80	0·63	0·97	0·77	0·60	0·94	0·03	0·03	0·03
	R	3,186,760	0·60	0·42	0·79	0·59	0·41	0·78	0·01	0·01	0·01
	U	617,348	1·80	1·73	1·88	1·67	1·59	1·76	0·13	0·14	0·12
Coimbatore	T	3,557,471	2·62	2·94	2·29	2·53	2·84	2·21	0·09	0·10	0·08
	R	2,525,302	0·63	0·68	0·57	0·61	0·66	0·56	0·02	0·02	0·01
	U	1,032,169	7·50	8·33	6·61	7·24	8·05	6·36	0·26	0·28	0·25
Nilgiri	T	409,308	15·12	16·54	13·57	14·57	15·99	13·02	0·55	0·55	0·55
	R	229,441	11·28	12·51	9·96	11·13	12·37	9·80	0·15	0·14	0·16
	U	179,867	20·02	21·63	18·23	18·97	20·57	17·18	1·05	1·06	1·05
Madurai	T	3,211,227	0·55	0·62	0·47	0·50	0·57	0·43	0·05	0·05	0·04
	R	2,195,482	0·15	0·18	0·12	0·14	0·17	0·11	0·01	0·01	0·01
	U	1,015,745	1·41	1·56	1·26	1·28	1·42	1·14	0·13	0·14	0·12

TABLE VII - 23 (Contd.)

In-migration from other States of India into the State classified by sex, expressed as percentages of total, rural and urban population of the State, 1961

State/district		Total Population	Percentage of total immigration from other States of India to actual population of State			Percentage of immigration from States adjacent to the State to actual population of State			Percentage of immigration from States other than those adjacent to State to actual population of State		
			T	M	F	T	M	F	T	M	F
		2	3	4	5	6	7	8	9	10	11
Tiruchirapalli	T	3,190,078	0·64	0·69	0·59	0·59	0·64	0·54	0·05	0·05	0·05
	R	2,512,007	0·14	0·14	0·13	0·13	0·13	0·12	0·01	0·01	0·01
	U	678,071	2·50	2·70	2·31	2·32	2·50	2·14	0·18	0·20	0·17
Thanjavur	T	3,245,927	0·68	0·63	0·72	0·63	0·58	0·68	0·05	0·05	0·04
	R	2,584,407	0·41	0·34	0·48	0·40	0·33	0·47	0·01	0·01	0·01
	U	661,520	1·70	1·74	1·66	1·54	1·56	1·51	0·16	0·18	0·15
Ramanathapuram	T	2,421,788	0·20	0·21	0·20	0·18	0·19	0·18	0·02	0·02	0·02
	R	1,822,307	0·08	0·10	0·07	0·07	0·09	0·06	0·01	0·01	0·01
	U	599,481	0·57	0·55	0·60	0·52	0·50	0·55	0·05	0.05	0.05
Tirunelveli	T	2,730,279	0·48	0·47	0·48	0·43	0·41	0·44	0·05	0·06	0·04
	R	1,882,397	0·21	0·19	0·24	0·19	0·17	0·22	0·02	0·02	0·02
	U	847,882	1·05	1·08	1·03	0·95	0·95	0·95	0·10	0·13	0·08
Kanyakumari	T	996,915	1·99	1·73	2·25	1·97	1·70	2·24	0·02	0·03	0·01
	R	846,836	1·62	1·37	1·88	1.60	1·34	1·88	0·02	0·03	N
	U	150,079	4·05	3·78	4·33	4·03	3·77	4·29	0·02	0.01	0·04

T—Total; R—Rural; U—Urban, M—Males, F—Females N—denotes negligible figures

This table indicates where immigrants are concentrated in Madras State and it shows that the movement is more in pursuit of non-agricultural occupations than agriculture. Again the bulk of immigrants coming to live in the urban sector are likely to be benefited by amenities like protected water supply,sanitation,education,medical facilities and electricity. About 5% of the urban population are immigrants. The standard of living of immigrants is generally higher than that of the natural population. About 27% of the Madras population live in towns and cities. If from this urban population, immigrants inhabiting the towns and cities are excluded, the porportion of urban population would decline to 25·5%. 70·68% of the immigrants live in urban areas while only 29·32% live in rural areas. 24·80% of male immigrants and 34·16% of female immigrants live in villages.

The immigrants from other States of India form 1·74%—males 1·80% and females 1·69%. The figures for the districts vary from 0·20% in Ramanathapuram to 15·12% in Nilgiri. Among males, the range is from 0·21% in Ramanathapuram to 16·54% in Nilgiri. For females the range is from 0·20% in Ramanathapuram to 13·57% in Nilgiri. Madras City has 9·91% of immigrants, males 10·80% and females 8·91%. Coimbatore and Chingleput have recorded figures in the range of 2 to 3%. Immigrants form 0·70% of total rural population-males 0·61% and females 0·78%. Again Ramanathapuram and Nilgiri exhibit the lowest and highest figures. In the urban sector, the percentage of immigrants is 4·62%, males 5.0% and females 4·23%. Madras, Chingleput, Coimbatore and Kanyakumari are the districts which have shown percentages between 4 and 10.

One striking thing is the pull exerted by the urban sector in attracting immigrants from other States when compared with the rural sector of Madras State. Except in Nilgiri, no appreciable attraction is recorded in the rural sector. Urban sectors of Salem, Madurai, Thanjavur, Ramanathapuram and Tirunelveli also do not attract many immigrants. The table reveals a lower figure of less than 2% in the above districts and in Ramanathapuram, it is as low as 0·75%. Further, bulk of the immigrants to Madras State are from the adjacent States. Again Nilgiri has the highest number and Ramanathapuram the lowest. The contribution of distant States is less than 0·50%. In the figures relating to migrants from non-adjacent States, Madras has the first place and Ramanathapuram has the last place. In the rural sector, Chingleput has alone recorded a better figure. In urban sector, Madras tops the list and the last place is taken by Kanyakumari.

Proportion of immigrants from other States of India in the economic classification of workers and non-workers

32. The table below gives the distribution of immigrants from other States of India in the nine industrial categories of workers and non-workers. The figures of total population and immigrants have been given in thousands. Immigrants have also been expressed as a percentage of the total population under each category.

TABLE VII - 24

Distribution in the State and districts of immigrants from other States of India in the nine industrial categories of workers and non-workers expressed as percentages of total population under each category, 1961

[(a) Total Population (Thousands); (b) Immigrant Population (Thousands); (c) (b) Expressed as percent of (a)]

State/District		Industrial classification of workers									Non-workers
		I	II	III	IV	V	VI	VII	VIII	IX	
1		2	3	4	5	6	7	8	9	10	11
Madras State	(a)	6,458	2,828	436	1,207	848	205	758	254	2,358	18,335
	(b)	21	14	22	13	43	5	36	17	101	315
	(c)	0·32	0·49	4·99	1·08	5·04	2·55	4·73	7·35	4·28	1·72

TABLE VII-24 (Contd.)

Distribution in the State and districts of immigrants from other States of India in the nine industrial categories of workers and non-workers expressed as percentages of total population under each category, 1961

[(a) Total Population (Thousands); (b) Immigrant Population (Thousands); (c) (b) Expressed as percent of (a)]

State/District		Industrial classification of workers									Non-workers
		I	II	III	IV	V	VI	VII	VIII	IX	
		2	3	4	5	6	7	8	9	10	11
Madras	(a)	N	N	7	13	129	23	101	62	192	1,202
	(b)	N	N	N	1	14	1	17	9	33	96
	(c)	23·08	15·54	5·78	6·66	10·72	5·89	16·71	14·11	17·44	7·96
Chingleput	(a)	335	241	28	82	59	12	37	17	142	1,243
	(b)	5	4	N	3	3	N	2	1	11	33
	(c)	1·23	1·52	1·38	3·24	5·54	1·98	4·95	8·02	7·90	2·66
North Arcot	(a)	756	251	22	102	64	14	59	18	183	1,677
	(b)	4	1	N	1	2	N	1	1	5	26
	(c)	0·51	0·61	0·60	1·36	2·36	1·85	2·23	5·71	2·57	1·53
South Arcot	(a)	691	401	26	56	23	12	40	12	136	1,651
	(b)	2	2	1	2	1	N	1	N	3	18
	(c)	0·30	0·49	3·22	2·35	3·74	3·79	2·78	3·41	1·96	1·11
Salem	(a)	1,068	250	29	205	63	23	65	16	233	1,852
	(b)	5	1	N	1	1	1	1	N	3	17
	(c)	0·51	0·34	0·87	0·39	1·97	0·97	1·48	2·25	1·33	0·92
Coimbatore	(a)	519	269	67	188	146	42	93	25	364	1,845
	(b)	1	1	4	2	12	2	8	3	15	45
	(c)	0·17	0·29	5·72	1·20	8·65	3·74	8·26	10·69	4·32	2·45

TABLE VII - 24 (Contd.)

Distribution in the State and districts of immigrants from other States of India in the nine industrial categories of workers and non-workers expressed as percentages of total population under each category, 1961

[(a) Total Population (Thousands); (b) Immigrant Population (Thousands); (c) (b) Expressed as percent of (a)]

State/District		Industrial classification of workers									Non-workers
		I	II	III	IV	V	VI	VII	VIII	IX	
1		2	3	4	5	6	7	8	9	10	11
Nilgiri	(a)	35	21	56	2	8	3	7	3	52	222
	(b)	2	3	14	1	3	N	2	N	14	23
	(c)	5·77	13·09	25·01	47·42	32·37	16·36	27·30	18·24	26·54	10·29
Madurai	(a)	570	293	46	70	84	15	84	22	275	1,752
	(b)	N	N	N	N	2	N	1	1	4	10
	(c)	0·02	0·02	0·46	0·52	1·82	1·03	1·27	2·41	1·44	0·55
Tiruchirapalli	(a)	862	257	23	77	74	17	57	23	182	1,618
	(b)	N	N	N	N	2	N	1	1	4	12
	(c)	0·02	0·03	0·24	0·56	2·86	0·71	1·78	4·45	1·93	0·73
Thanjavur	(a)	495	446	35	51	53	16	73	19	176	1,882
	(b)	1	1	N	1	1	N	2	N	3	13
	(c)	0·14	0·31	0·63	0·78	1·96	0·99	1·53	1·87	1·94	0·70
Ramanathapuram	(a)	616	167	23	92	51	10	50	11	142	1,260
	(b)	N	N	1	N	N	N	N	N	1	3
	(c)	0·01	0·02	0·16	0·09	0·80	0·85	0·36	1·63	0·47	0·26
Tirunelveli	(a)	438	201	47	192	76	13	71	20	187	1,485
	(b)	N	N	1	N	1	N	N	1	2	8
	(c)	0·04	0·05	0·91	0·16	1·19	0·58	0·52	5·27	0·85	0·54
Kanyakumari	(a)	73	31	27	77	18	5	21	6	93	646
	(b)	1	1	1	1	1	1	N	N	3	11
	(c)	1·36	2·01	3·35	1·91	3·26	1·40	2·26	4·62	3·37	1·75

N denotes negligible figures

Note: Percentages have been worked out on the absolute figures and not on the rounded off figures

The immigrants from other States are found distributed in all categories of workers and non-workers. 7% are found in the category of Transport, Storage and Communications. The percentage ranges from 3 to 5 in the categories of Mining and Quarrying, Construction, Trade and Commerce and Other Services. Household Industry has recorded a small percentage of 1%. In the categories of Cultivator and Agricultural Labourer, the percentage is less than 0.5. Non-workers in the total population works out to 54.4% while among migrants the percentage is only slightly less—53.7%. Nilgiri and Madras have recorded high percentages in all categories of workers and non-workers. In the category of Household Industry, South Arcot and Chingleput have recorded appreciable figures and in the category of Transport, Storage and Communications, Coimbatore. In the category of Other Services, Chingleput can be mentioned. It is rather interesting to find the high percentage for Madras in the categories Cultivator and Agricultural Labourer. The figure under Cultivator may perhaps be due to persons belonging to other States having settled in Madras for the higher education of children. Figures under Agricultural Labourer is equally perplexing except that Madras may have attracted casual labourers from neighbouring States.

In Table VII-25 is presented the distribution of industrial categories of workers and non-workers among the General Population and among immigrants from other parts of India classified under Primary, Secondary and Tertiary sectors. Absolute figures as well as percentage figures have been given. The percentage of population in the working age-group 15-59 to total population of each sector and individual category of workers in the State is also given.

TABLE VII - 25

Distribution of industrial categories of workers and non-workers among the General Population and among immigrants from other States of India, 1961

Sector/Category	Population of State	Immigrants from States in India	Immigrants from adjacent States	Immigrants from States other than adjacent States	Percentage of immigrants from States of India to population of State			Percentage of population aged 15 - 59 to total of its category		
					P	M	F	T	R	U
1	2	3	4	5	6	7	8	9	10	11
Total	33,686,953	587,745	539,623	48,122	1·74	1·80	1·69	56·79	56·60	57·31
Primary Sector	9,721,705	56,289	55,887	402	0·58	0·47	0·75	85·98	85·87	88·01
I	6,457,833	20,738	20,584	154	0·32	0·23	0·50	86·45	86·48	85·56
II	2,828,374	13,827	13,791	36	0·49	0·36	0·63	86·40	86·24	89·17
III	435,498	21,724	21,512	212	4·99	4·08	7·86	76·34	70·45	90·63
Secondary Sector	2,055,114	55,717	52,944	2,773	2·71	3·39	1·15	87·45	85·08	90·18
IV	1,206,812	12,985	12,785	200	1·08	1·15	0·98	84·22	83·45	85·90
V	848,302	42,732	40,159	2,573	5·04	5·43	2·04	92·04	90·02	92·99

TABLE VII-25 (Contd.)

Distribution of industrial categories of workers and non-workers among the General Population and among immigrants from other States of India, 1961

Sector/Category	Population of State	Immigrants from States in India	Immigrants from adjacent States	Immigrants from States other than adjacent States	Percentage of immigrants from States of India to population of State			Percentage of population aged 15-59 to total of its category		
					P	M	F	T	R	U
1	2	3	4	5	6	7	8	9	10	11
Tertiary Sector	3,574,802	160,701	146,462	14,239	4·50	5·28	2·18	90·71	88·71	93·04
VI	205,327	5,230	4,986	244	2·55	2·78	1·15	91·30	90·26	92·33
VII	758,301	35,904	28,749	7,155	4·73	5·15	1·89	90·80	88·78	92·00
VIII	253,601	18,650	17,399	1,251	7·35	7·27	11·48	96·97	95·73	97·29
IX	2,357,573	100,917	95,328	5,589	4·28	5·30	2·20	89·95	88·35	92·71
Non-workers X	18,335,332	315,038	284,330	30,708	1·72	1·27	1·98	31·27	27·39	39·45

P—Persons; M—Males; F—Females; T—Total; R—Rural; U—Urban.

1.74% of the total population are immigrants from other States of India. Among all males, 1.80% are those born in various States while among females the percentage falls to 1.69. In the Primary sector, consisting of industrial categories I, II and III, a percentage of 0.58 of the population are immigrants from other States of India. Males—0.47% are less than females—0.75%. Percentage in the categories mentioned above varies from 4·08% in category III to 0.23% in category I among males. For females the percentage ranges from 7.86 in category III to 0·50 in category I. In the Primary sector, some of the immigrants are found engaged in mining and quarrying etc. than under Agricultural Labourer or Cultivator. Females are more prominent than males in this sector and significantly in category III.

Migrants from other States in the Secondary sector consisting of industrial categories IV and V account for 2.71% of the total population, percentages of males and females being 3.39 and 1.15 respectively. Category V—Manufacturing other than Household Industry plays a significant part among immigrants from other States. Males are predominant in this sector.

Tertiary sector comprising the industrial categories of VI, VII, VIII and IX emerges as the most significant sector. The percentages of immigrants to total population engaged in Tertiary sector are Persons—4.50%, Males—5.28% and Females—2.18%. Among the individual categories, VIII—Transport, Storage and Communications—plays a prominent role followed by IX—Other Services. It is a strange feature to find a female predominance in category VIII.

Out of a total of 587,745 persons who are immigrants from other States of India, 272,707 or 46.40% are workers. Out of this, 160,701 persons or 58.93% are engaged in Tertiary sector and 55,717 or 20.43% in the Secondary sector. This table clearly shows the preference for non-agricultural vocations rather than the primary agricultural pursuits by immigrants. In fact, these immigrants have contributed to the economic production in the State. Non-workers form

53.60% of the total immigrants. The percentage of non-workers among the General Population is 54.43.

Percentage of workers among the immigrant population is only slightly higher than that of the General Population. It can, therefore, be inferred that the immigrant population are not workers alone, but with children and women in the non-working group also. In the total population, persons aged 15-59 form 56.79%. Among the rural population, the percentage is 56.60. Among the urban population, the percentage is 57.31. Figures are better in the urban sector. Among workers in the total sector, the figure varies from 85.98% under Primary sector to 90.71% in the Tertiary sector. In the rural sector, the percentage varies from 85.08 in Secondary sector to 88.71 in Tertiary sector. In the urban sector, the range is from 88.01 in Primary sector to 93.04 in Tertiary sector. Among non-workers, persons aged 15-59 form 31.27% in the total sector. In the rural sector, the percentage is 27.39 and in the urban sector the percentage is 39.45. Higher percentages are seen in all the three industrial sectors in the urban population.

Since data for immigrants by age-groups have not been collected, it will not be possible to compare them with the General Population. But we can say that not much oscillation can be found from the pattern shown by the General Population in as much as the distribution of workers and non-workers in both the classes are almost similar.

Emigrants to other States of India and their distribution among workers and non-workers

33. In the preceding paragraphs, I have discussed the pattern of distribution of the immigrant population in the State. Now I propose to discuss about the emigrant population from Madras to other States of India and their distribution. The figures are presented in Table VII—26.

TABLE VII-26

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector		Tertiary Sector				Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
1			3	4	5	6	7	8	9	10	11	12	13
STATES													
Andhra Pradesh	Males	79,388	55,920	5,643	4,016	1,633	4,629	6,653	5,264	7,460	5,730	14,892	23,468
	Females	92,520	29,835	9,559	7,966	723	3,742	648	2,075	1,192	78	3,852	62,685
	Total	171,908	85,755	15,202	11,982	2,356	8,371	7,301	7,339	8,652	5,808	18,744	86,153
Assam	M	4,942	3,879	254	48	955	13	375	62	78	270	1,824	1,063
	F	2,684	1,093	58	7	835	69	8	19	3	8	86	1,591
	T	7,626	4,972	312	55	1,790	82	383	81	81	278	1,910	2,654
Bihar	M	6,689	4,773	45	31	957	142	1,567	142	234	412	1,243	1,916
	F	4,496	369	9	6	71	10	18	13	17	8	217	4,127
	T	11,185	5,142	54	37	1,028	152	1,585	155	251	420	1,460	6,043
Gujarat	M	7,398	5,556	15	5	19	121	2,109	327	254	870	1,836	1,842
	F	4,368	340	11	5	4	21	39	47	10	50	153	4,028
	T	11,766	5,896	26	10	23	142	2,148	374	264	920	1,989	5,870

TABLE VII-26 (Contd.)

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector		Tertiary Sector				Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
		2	3	4	5	6	7	8	9	10	11	12	13
Jammu & Kashmir	M	316	229	...	...	2	...	...	2	2	7	216	87
	F	226	8	...	...	...	...	...	...	...	...	8	218
	T	542	237	...	...	2	...	...	2	2	7	224	305
Kerala	M	101,031	76,567	3,069	3,099	36,779	1,042	6,082	4,328	6,326	2,885	12,957	24,464
	F	91,256	43,818	1,721	2,351	33,202	1,220	704	765	268	74	3,513	47,438
	T	192,287	120,385	4,790	5,450	69,981	2,262	6,786	5,093	6,594	2,959	16,470	71,902
Madhya Pradesh	M	12,251	9,380	83	43	332	90	1,861	1,907	916	1,268	2,880	2,871
	F	7,414	1,406	162	27	115	23	125	488	45	69	352	6,008
	T	19,665	10,786	245	70	447	113	1,986	2,395	961	1,337	3,232	8,879
Mysore	M	210,377	166,298	8,972	9,925	27,630	5,087	33,813	25,325	12,866	6,162	36,518	44,079
	F	186,343	61,083	7,405	6,521	14,484	3,018	6,220	10,959	1,744	105	10,627	125,260
	T	396,720	227,381	16,377	16,446	42,114	8,105	40,033	36,284	14,610	6,267	47,145	169,339
Maharashtra	M	74,109	54,204	80	71	928	556	17,453	1,772	6,272	9,336	17,736	19,905
	F	47,083	3,932	67	48	220	134	503	305	355	511	1,789	43,151
	T	121,192	58,136	147	119	1,148	690	17,956	2,077	6,627	9,847	19,525	63,056

TABLE VII-26 (Contd.)

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector		Tertiary Sector				Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
1		2	3	4	5	6	7	8	9	10	11	12	13
Orissa	M	5,390	4,464	53	18	317	270	543	370	538	581	1,774	926
	F	3,175	489	14	7	41	10	14	46	28	7	322	2,686
	T	8,565	4,953	67	25	358	280	557	416	566	588	2,096	3,612
Punjab	M	5,318	4,386	12	10	4	44	169	107	82	32	3,926	932
	F	2,077	117	10	1	...	23	4	23	1	1	54	1,960
	T	7,395	4,503	22	11	4	67	173	130	83	33	3,980	2,892
Rajasthan	M	2,439	1,455	8	2	175	20	169	151	89	243	598	984
	F	1,430	202	5		32	13	9	27	1	4	107	1,228
	T	3,869	1,657	13	6	207	33	178	178	90	247	705	2,212
Uttar Pradesh	M	6,548	4,508	98	18	28	196	482	163	259	392	2,872	2,040
	F	4,151	324	61	17	8	22	6	3	5	3	199	3,827
	T	10,699	4,832	159	35	36	218	488	166	264	395	3,071	5,867
West Bengal	M	23,630	16,736	53	34	387	60	6,814	463	2,207	2,269	4,449	6,894
	F	15,375	1,592	13	15	80	12	542	28	131	84	687	13,783
	T	39,005	18,328	66	49	467	72	7,356	491	2,338	2,353	5,136	20,677

TABLE VII-26 (Contd.)

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector		Tertiary Sector				Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
1		2	3	4	5	6	7	8	9	10	11	12	13
UNION TERRITORIES AND OTHER AREAS													
Andaman & Nicobar Islands	M	3,623	3,406	99	41	633	16	145	1,535	213	40	684	217
	F	830	112	40	1	11	...	10	4	14	...	32	718
	T	4,453	3,518	139	42	644	16	155	1,539	227	40	716	935
Delhi	M	10,711	7,133	...	1	2	13	521	71	619	298	5,608	3,578
	F	8,424	1,262	2	...	...	6	12	...	22	7	1,213	7,162
	T	19,135	8,395	2	1	2	19	533	71	641	305	6,821	10,740
Himachal Pradesh	M	44	30	...	...	1	...	2	6	...	...	21	14
	F	24	8	4	...	...	...	...	...	...	...	4	16
	T	68	38	4	...	1	...	2	6	...	...	25	30
Minicoy & Amindivi Islands	M	27	22	...	...	...	...	...	16	...	4	2	5
	F	20	8	...	...	...	...	...	8	...	...	...	12
	T	47	30	...	...	...	...	...	24	...	4	2	17

TABLE VII-26 (Contd.)

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector		Tertiary Sector				Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
		2	3	4	5	6	7	8	9	10	12	12	13
Manipur	M	12	10	...	...	...	1	...	1	2	1	5	2
	F	9	7	...	...	...	...	...	...	...	...	7	2
	T	21	17	...	...	...	1	...	1	2	1	12	4
Tripura	M	42	38	5	...	11	...	1	3	...	4	14	4
	F	23	7	...	1	3	...	...	...	...	...	3	16
	T	65	45	5	1	14	...	1	3	...	4	17	20
Dadra & Nagar Haveli	M	3	3	...	...	...	...	1	1	...	...	1	...
	F	3	...	...	...	...	...	...	...	...	...	...	3
	T	6	3	...	...	...	...	1	1	...	...	1	3
Goa, Diu & Daman	M	140	92	...	3	69	3	...	1	2	10	4	48
	F	52	16	...	...	12	...	...	...	...	...	4	36
	T	192	108	...	3	81	3	...	1	2	10	8	84
N.E.F.A.	M	515	509	...	...	...	...	...	1	...	1	507	6
	F	13	1	...	...	...	...	...	...	...	...	1	12
	T	528	510	...	...	...	...	...	1	...	1	508	18

TABLE VII-26 (Contd.)

Emigrants from Madras State to other States of India classified by industrial category of workers and non-workers and sex, 1961

Emigrants to		Total population	Total workers	Primary Sector			Secondary Sector			Tertiary Sector			Non-workers
				I	II	III	IV	V	VI	VII	VIII	IX	X
		2	3	4	5	6	7	8	9	10	11	12	13
Nagaland	M	104	101	...	...	28	...	...	...	1	...	72	3
	F	16	3	...	1	1	...	...	...	...	...	1	13
	T	120	104	...	1	29	...	...	...	1	...	73	16
Pondicherry	M	21,909	15,096	1,231	2,260	804	697	3,072	558	2,207	903	3,364	6,813
	F	46,597	12,187	1,596	6,102	94	1,136	372	61	885	4	1,937	34,410
	T	68,506	27,283	2,827	8,362	898	1,833	3,444	619	3,092	907	5,301	41,223
Sikkim	M	23	22	...	...	2	...	...	17	...	...	3	1
	F	3	...	...	...	...	...	...	...	...	...	...	3
	T	26	22	...	...	2	...	...	17	...	...	3	4

M—Males; F—Females; T—Total.

Andhra Pradesh

Tertiary sector has a large number of workers than the other two sectors. Secondary sector has the least number among workers. As Andhra Pradesh does not possess much industry, it cannot attract persons from Madras for industrial employment. The predominance of the Tertiary sector may be due to the transfer of Government offices and other institutions on the formation of Andhra Pradesh. Categories I, II and IX engage more than 10,000 persons each.

Assam

Tertiary sector as well as Primary sector are prominent. Categories III and IX have the maximum number among workers. The movement of Tamilian labour to plantations in Assam is a well-known fact. The prominence of category IX-Other Services which include Government service, medical, educational and health services as well as Police and Military personnel does not need any explanation.

Bihar

The order of prominence is Tertiary, Secondary and Primary sector. Categories, V, IX and III have the highest number among workers. Madrasi labour can be found in the coal fields of Bihar. Heavy Electricals of Ranchi and other public sector undertakings employ a large number of Madras born people. Presence of Madrasis in Government and other services is a common feature throughout India.

Gujarat

Madras born persons are prominent in the Tertiary and Secondary sectors. Categories IX, V and VIII have the largest numbers. Gujarat with a number of textile mills has employed a good proportion of Madrasis. The other two categories iuclude Railways, Post and Telegraphs and Government services where the presence of Madrasis is nothing new.

Kerala

Predominant industrial categories are III, IX V and VII. Plantations in Kerala employ a large number of Madras born persons. Other Services have also their usual quota of Madrasis. A number of Madrasis are engaged in Manufacturing other than Household Industry though not to the same extent as in categories III and IX. Kerala has not yet developed industrially.

Madhya Pradesh

Tertiary sector is the most important, engaging a good number Madras born persons. Secondary sector is not significant. Categories VI, VIII and IX are prominent in the Tertiary sector. They include construction, Post and Telegraphs, Railway and Government services.

Maharashtra

Bombay, the State's capital has been the chief habitation of Madras born people employed in the State capital which is also the biggest city in India. It is also one of the chief industrial and commercial centres of India. We can find Madrasis employed in all kinds of establishments and services. Tertiary Sector is the predominant field engaging the maximum number of workers among Madrasi population. Next comes Secondary sector.

Mysore

The order of prominence in which workers among Madras emigrants to Mysore are distributed is (1) Tertiary (2) Primary and (3) Secondary. Workers of Madras origin are found in the plantations and coal and gold fields of Mysore. Further, because of its nearness to Madras State we have Madras born persons settled in agricultural activities in this State. The Bangalore and Mysore, industrial complexes provide good employment opportunities to Madras born persons. With the longer association with Madras, we find a number of Madras born persons engaged in trade, transport, construction, Government and Public Services in Mysore.

West Bengal

Tertiary and Secondary sectors engage the largest number of workers who are of Madrasi origin. Categories V and IX are the predominant ones. Calcutta with it vast industries and services has been a strong hold for Madarasi emigrants from 1930 onwards.

Uttar Pradesh

Tertiary sector is prominent and category IX

engages the largest number of workers, which is a natural one.

Among the Union territories, as far as emigrants from Madras is concerned, Delhi and Pondicherry deserve mention. In Delhi, Tertiary sector plays a predominant role. Category IX which includes Government services has the largest number among workers and it is a well known fact that many Madrasis are working in the Government offices at Delhi.

In Pondicherry, most of its territory being enclaved in Madras State, has the largest number of workers in the Primary sector. The next place is taken by Tertiary sector. Frequent movement of population takes place between Madras and Pondicherry and the industries and services depend on Madras born persons to a great extent. Even in agricultural activities, Madras born persons help the Pondicherry landed proprietors.

The table below gives the percentage of workers and non-workers among the total population, males and females separately in respect of persons born in Madras and emigrated to other States of India.

TABLE VII - 27

Percentage of workers and non-workers among the emigrant population from Madras to other States of India

State to which emigrated	Persons		Males		Females	
	% of workers	% of non-workers	% of workers	% of non-workers	% of workers	% of non-workers
1	2	3	4	5	6	7
STATES						
Andhra Pradesh	49·88	50·12	70·44	29·56	32·25	67·75
Assam	65·20	34·80	78·49	21·51	40·72	59·28
Bihar	45·97	54·03	71·36	28·64	8·21	91·79
Gujarat	50·11	49·89	75·10	24·90	7·78	92·22
Jammu & Kashmir	43·73	56·27	72·47	27·53	3·54	96·46
Kerala	62·61	37·39	75·79	24·21	48·02	51·98
Madhya Pradesh	54·85	45·15	76·57	23·43	18·96	81·04
Maharastra	47·97	52·03	73·14	26·86	8·35	91·65
Mysore	57·32	42·68	79·05	20·95	32·78	67·22
Orissa	57·83	42·17	82·82	17·18	15·40	84·60
Punjab	60·89	39·11	82·47	17·53	5·63	94·37
Rajasthan	42·83	57·17	59·66	40·34	14·13	85·87
Uttar Pradesh	45·16	54·84	68·85	31·15	7·81	92·19
West Bengal	46·99	53·01	70·83	29·17	10·35	89·65

TABLE VII-27 (Contd.)

Percentage of workers and non-workers among the emigrant population from Madras to other States of India

State to which emigrated	Persons		Males		Females	
	% of workers	% of non-workers	% of workers	% of non-workers	% of workers	% of non-workers
1	2	3	4	5	6	7
UNION TERRITORIES						
Andaman & Nicobar Islands	79·00	21·00	94·01	5·99	13·49	86·51
Delhi	43·87	56·13	66·60	33·40	14·98	85·02
Himachal Pradesh	55·88	44·12	68·18	31·82	33·33	66·67
Laccadive, Minicoy & Amindivi Islands	63·83	36·17	81·48	18·52	40·00	60·00
Manipur	80·95	19·05	83·33	16·67	77·78	22·22
Tripura	69·23	30·77	90·48	9·52	30·43	69·57
Dadra & Nagar Haveli	50·00	50·00	100·00	...	...	100·00
Goa, Diu & Daman	56·25	43·75	65·71	34·29	30·77	69·23
N. E. F. A.	96·59	3·41	98·83	1·17	7·69	92·31
Nagaland	86·67	13·33	97·12	2·88	18·75	81·25
Pondicherry	39·83	60·17	68·90	31·10	26·15	73·85
Sikkim	84·62	15·38	95,65	4·35	...	100·00

Workers among the emigrants from Madras vary from 39·83% in Pondicherry to 96·59% in N.E.F.A. In Andhra Pradesh, Bihar, Jammu and Kashmir, Maharashtra, Rajasthan, Uttar Pradesh and West Bengal, the percentage of workers among the emigrants from Madras form less than 50% of the total emigrants. Assam, Gujarat, Kerala, Madhya Pradesh, Mysore, Orissa, Punjab, Himachal Pradesh, Andaman and Nicobar Islands, Manipur, Minicoy and Amindivi Islands, Tripura, Dadra and Nagar Haveli, Goa, Diu and Daman, N.E.F.A., Nagaland and Sikkim show 50% and above.

Workers among males vary from 59·66% in Rajasthan to cent percent in Dadra and Nagar Haveli. Percentage of workers among females varies from 3·54 in Jammu and Kashmir to 77·78 in Manipur. Andhra Pradesh, Assam, Kerala, Mysore, Himachal Pradesh, Minicoy and Amindivi Islands, Manipur and Tripura show 30% and more. Thre are no workers among females in Dadra and Nagar Haveli and Sikkim.

Since most of the Madras born women are not employed gainfully in the States of Bihar, Gujarat, Jammu and Kashmir, Madhya Pradesh, Maharashtra, Punjab, Uttar Pradesh, N.E.F.A. and Delhi, the percentage of workers in the total population gets reduced. This is because the males who move to these States are mostly employed in Transport and Communications, Trade and Commerce, Other Services and Industries where they are well paid and better placed economically, so that the necessity of their women folk going to work and earning to add to the income of the household is restricted. While in the case of the migrants to the neighbouring States of Andhra Pradesh, Mysore, Kerala and Pondicherry, many of them are engaged in the Primary sector where women can help men to earn something to augment the family's resources. In the case of Assam, a good number of the emigrants are engaged in tea plantations where good opportunity for women employment exists.

Distribution of immigrants from other States of *India* by *industrial categories of workers* and non-workers

34. Table VII-28 gives the distribution of immigrants from other States by industrial category of workers and non-workers per 10,000 of immigrant population. Figures for the State and districts have been given by rural and urban areas separately.

TABLE VII - 28

Distribution by industrial category of workers and non-workers of immigrants from other States of India per 10,000 of all immigrant population (TRU) in the State, 1961

State & District	Total Rural Urban	Per 10,000 of all immigrant population belonging to									Non-workers
		I	II	III	IV	V	VI	VII	VIII	IX	X
1	2	3	4	5	6	7	8	9	10	11	12
Madras State	T	353	235	370	221	727	89	611	317	1,717	5,360
	R	1,122	734	513	344	342	66	202	83	1,498	5,096
	U	34	28	310	170	887	99	780	414	1,808	5,470
Madras	T & U	1	2	24	51	807	78	984	513	1,954	5,586
Chingleput	T	668	593	63	428	523	38	296	223	1,819	5,349
	R	1,074	955	77	369	310	32	193	115	1,986	4,889
	U	59	50	43	517	843	46	450	386	1,567	6,039
North Arcot	T	938	368	32	336	366	65	318	251	1,136	6,190
	R	1,842	687	45	302	150	53	149	75	771	5,926
	U	47	53	19	369	578	77	485	425	1,496	6,451
South Arcot	T	698	653	280	438	287	150	369	140	887	6,098
	R	1,165	1,094	183	398	129	117	222	53	787	5,852
	U	84	75	408	491	494	194	561	254	1,018	6,421

TABLE VII-28 (Contd.)

Distribution by industrial category of workers and non-workers of immigrants from other States of India per 10,000 of all immigrant population (TRU) in the State, 1961

State & District	Total Rural Urban	Per 10,000 of all immigrant population belonging to I	II	III	IV	V	VI	VII	VIII	IX	Non-workers X
	2	3	4	5	6	7	8	9	10	11	12
Salem	T	1,802	283	82	262	407	73	319	119	1,020	5,633
	R	2,809	440	95	266	125	38	122	39	777	5,289
	U	60	10	61	254	894	135	659	258	1,442	6,227
Coimbatore	T	97	84	411	242	1,355	168	817	290	1,683	4,853
	R	543	444	102	541	1,002	162	412	133	1,798	4,863
	U	6	10	474	181	1,427	170	900	322	1,659	4,851
Nilgiri	T	332	438	2,266	105	459	78	318	98	2,223	3,683
	R	528	799	2,428	105	393	57	188	69	2,199	3,234
	U	191	178	2,149	106	507	93	411	118	2,240	4,007
Madurai	T	71	39	119	207	874	91	604	297	2,250	5,448
	R	257	156	468	144	835	229	171	104	2,616	5,020
	U	28	13	40	221	882	59	703	341	2,167	5,546
Tiruchirapalli	T	71	44	27	210	1,042	58	501	489	1,730	5,828
	R	335	224	56	232	842	71	221	174	2,096	5,749
	U	18	8	22	205	1,081	56	557	552	1,657	5,844
Thanjavur	T	317	623	100	182	470	73	513	159	1,555	6,008
	R	596	1,245	112	190	342	54	285	37	1,157	5,982
	U	52	33	88	174	592	92	731	274	1,932	6,032
Ramanathapuram	T	109	60	73	172	833	166	362	343	1,338	6,544
	R	319	166	40	186	505	73	80	412	2,193	6,026
	U	17	15	87	166	976	206	485	314	964	6,770
Tirunelveli	T	133	82	325	240	694	60	284	812	1,218	6,152
	R	312	235	858	299	473	84	136	89	905	6,609
	U	52	12	84	213	795	49	350	1,139	1,360	5,946
Kanyakumari	T	501	317	451	741	292	38	243	130	1,586	5,701
	R	687	456	638	828	132	17	147	46	1,442	5,607
	U	82	.2	28	544	654	.85	462	319	1,911	5,913

In the State 53·60% of all immigrants are non-workers. Less than 50% are workers. Highest percentage (17·17%) is engaged in Other Services. Manufacturing other than Household Industry engages 7·27% of the immigrants from other States. Trade and Commerce has 6·11% of the immigrants.

In the rural sector, 50·96% are non-workers. There is slight increase in the percentage of workers from the total sector. Even in this sector, Other Services has the highest number (14·98%) followed by Cultivator (11·22%) and then by Agricultural Labourer (7·34%). This is what could be expected as not much industrial or commercial activity can be witnessed in the rural parts of Madras State. In the urban sector, Other Services with 18·08% tops the list followed by Manufacturing other than Household Industry with 8·87% and then by Trade and Commerce, 7·80%. Significant variation can be seen between the rural and urban sectors in the engagement of immigrants in industrial categories I, II, IV, V, VII and VIII.

Non-workers among immigrants constitute less than 50% in Nilgiri (36·83%) and Coimbatore (48·53%). In all other districts the percentage is above 50%. The highest percentage of non-workers is recorded in Ramanathapuram district (65·44%). In the rural as well as in the urban sectors, the same trend is seen. Coimbatore with a highly developed industrial economy and trade has naturally a better percentage of workers. In the case of Nilgiri, a small district with lesser proportion of indigenous population, plantation activities are carried on a large scale which have to depend on external labour and has, therefore, recorded a higher percentage of workers.

The following districts show a different trend in the rural sector from that of the State as a whole in the distribution of immigrant workers.

	1st	2nd	3rd
State	IX	I	II
North Arcot	I	IX	II
South Arcot	I	II	IX
Salem	I	IX	II
Coimbatore	IX	V	I
Nilgiri	III	IX	II
Madurai	IX	V	III
Tiruchirapalli	IX	V	I
Thanjavur	II	IX	I
Ramanathapuram	IX	V	VIII
Tirunelveli	IX	III	V
Kanyakumari	IX	IV	I

In the urban sector, the following are the districts which exhibit a varied pattern from that of the State.

	1st	2nd	3rd
State	IX	V	VII
Madras	IX	VII	V
South Arcot	IX	VII	V
Nilgiri	IX	III	V
Thanjavur	IX	VII	V
Ramanathapuram	V	IX	VII
Tirunelveli	IX	VIII	V
Kanyakumari	IX	V	IV

North Arcot, South Arcot, Salem and Thanjavur are agricultural districts with lesser industrial activity. As such, the proportion of immigrants engaged in non-agricultural pursuits will be much less. In Nilgiri, the prominent category is mining and quarrying which is what can be expected in a plantation district.

In the urban sector, the prominence of Manufacturing other than Household Industry in Ramanathapuram is somewhat strange. With little industrial activity, the emergence of category V as the predominant category cannot be easily explained.

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(as on 17 February 1964)

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2 Wadhawa & Co., 45, Civil Lines ... (Reg.)

3 Banwari Lal Jain, Publishers, Moti Katra ... (Rest.)

4 English Book Depot, Sadar Bazar, Agra Cantt. ... (Rest.)

AHMADNAGAR—V.T. Jorakar. Prop., Rama General Stores, Navi Path (Rest.)

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2 Chandra Kant Chiman Lal Vora, Gandhi Road, (Reg.)

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ALIGARH — Friends' Book House, Muslim University Market ... (Reg.)

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1 Superintendent, Printing & Stationery, U. P. ...

2 Kitabistan, 17-A, Kamla Nehru Road ... (Reg.)

3 Law Book Co., Sardar Patel Marg, P. Box 4 ... (Reg.)

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5 Universal Book Co., 20, M. G. Road ... (Reg.)

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7 Wadhwa & Co., 23, M. G. Marg... (Rest.)

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2 S. Gupta, Agent, Government Publications, Near P.O. Majith Mandi (Reg.)

3 Amar Nath & Sons, Near P. O. Majith Mandi ... (Reg.)

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ASANSOL—D. N. Roy & R. K. Roy, Booksellers, Atwal Building ... (Rest.)

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3 The Bangalore Press, Lake View, Mysore Road, P.O. Box 507 ... (Reg.)

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1 Shri Chandrakant Mohan Lal Shah, Raopura ... (Rest.)

2 Good Companions Booksellers, Publishers & Sub-Agent ... (Rest.)

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BHAGALPUR—Paper Stationery Stores, D. N. Singh Road ... (Reg.)

BHOPAL—

1 Superintendent, State Government Press

2 Lyall Book Depot, Mohd. Din Bldg, Sultania Road ... (Reg.)

3 Delite Books, Opp. Bhopal Talkies (Rest.)

BHUBANESWAR—Ekamra Vidyabhaban, Eastern Tower, Room No. 3 (Rest.)

BIJAPUR—Shri D.V. Deshpande, Recognised Law Booksellers, Prop. Vinod Book Depot, Near Shiralshetti Chowk ... (Rest.)

BIKANER—Bhandani Bros. ... (Rest.)

BILASPUR—Sharma Book Stall, Sadar Bazar ... (Rest.)

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2 Charles Lambert and Co., 101, Mahatma Gandhi Road ... (Reg.)

3 Co-operator's Book Depot, 5/32, Ahmed Sailor Bldg., Dadar ... (Reg.)

4 Current Book House, Maruti Lane, Raghunath Dadaji St. ... (Reg.)

5 Current Technical Literature Co. P. Ltd., India House, 1st Floor ... (Reg.)

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15 N.M. Tripathi Private Ltd., Princess Street ... (Reg.)

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23 Bombay National History Society, 91, Walkeshwar Road ... (Rest.)

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3 Hindu Library, 69 A, Bolaram De Street ... (Reg.)

4 S. K. Lahiri and Co. Private Ltd., College Street .. (Reg.)

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19 Current Literature Co. 208, Mahatma Gandhi Road ... (Reg.)

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CHANDIGARH—

1 Supdt. Govt. Printing and Stationery, Punjab ...

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3 Rama News Agency, Bookseller, Sector No. 22 ... (Reg.)

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1 Press Officer, Orissa Sectt.

2 Cuttack Law Times ... (Reg.)

3 Prabhat K. Mahapatra, Mangalabag, P. B. 35 ... (Reg.)

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3 Federal Law Book Depot, Kashmere Gate ... (Reg.)

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13 Dhanwant Medical & Law Book House, 1522, Lajpat Rai Market (Rest.)

14 University Book House, 15, U. B. Bangalore Road, Jawahar Nagar (Rest.)

15 Law Literature House, 2646, Balimaran ... (Rest.)

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18 B. Nath & Bros., 3808, Charkhawalan (Chowri Bazar) ... (Rest.)

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IMPHAL—Tikendra & Sons, Bookseller (Rest.)

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KARUR—Shri V. Nagaraja Rao, 26, Srinivasapuram ... (Rest.)

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